

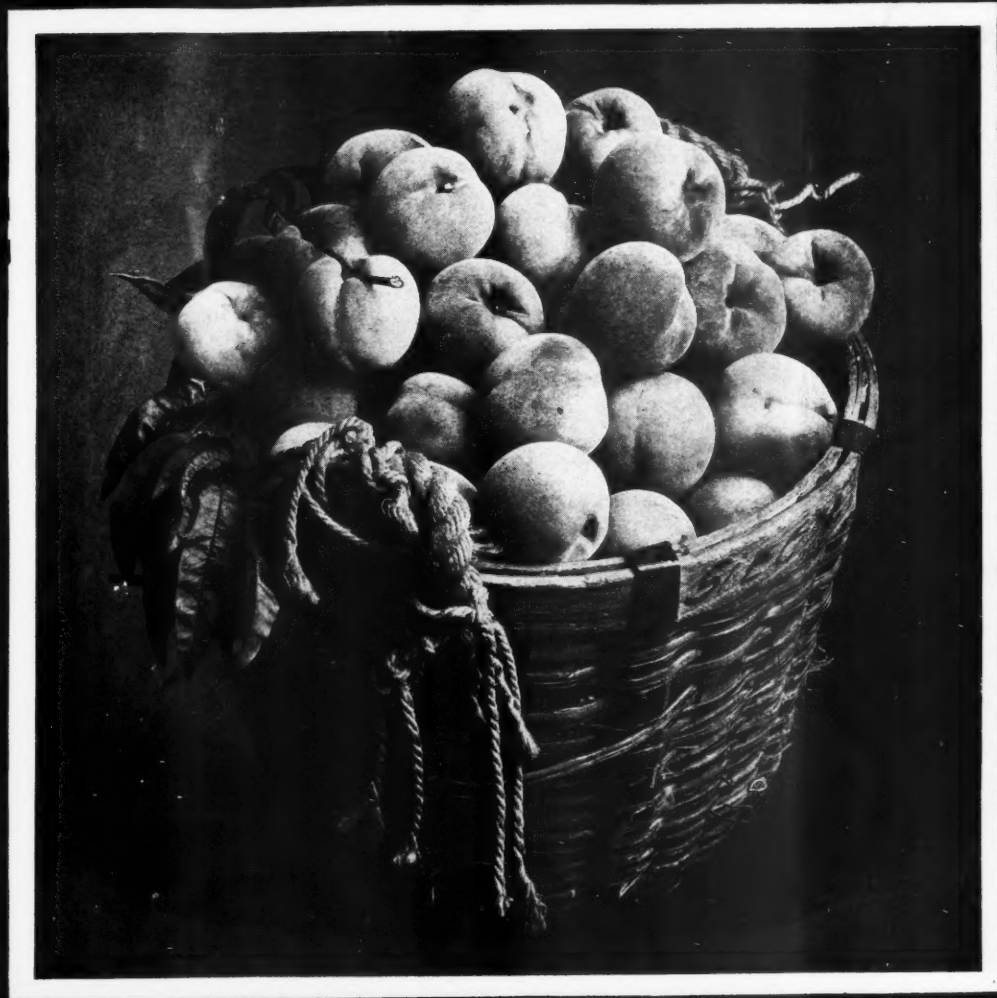
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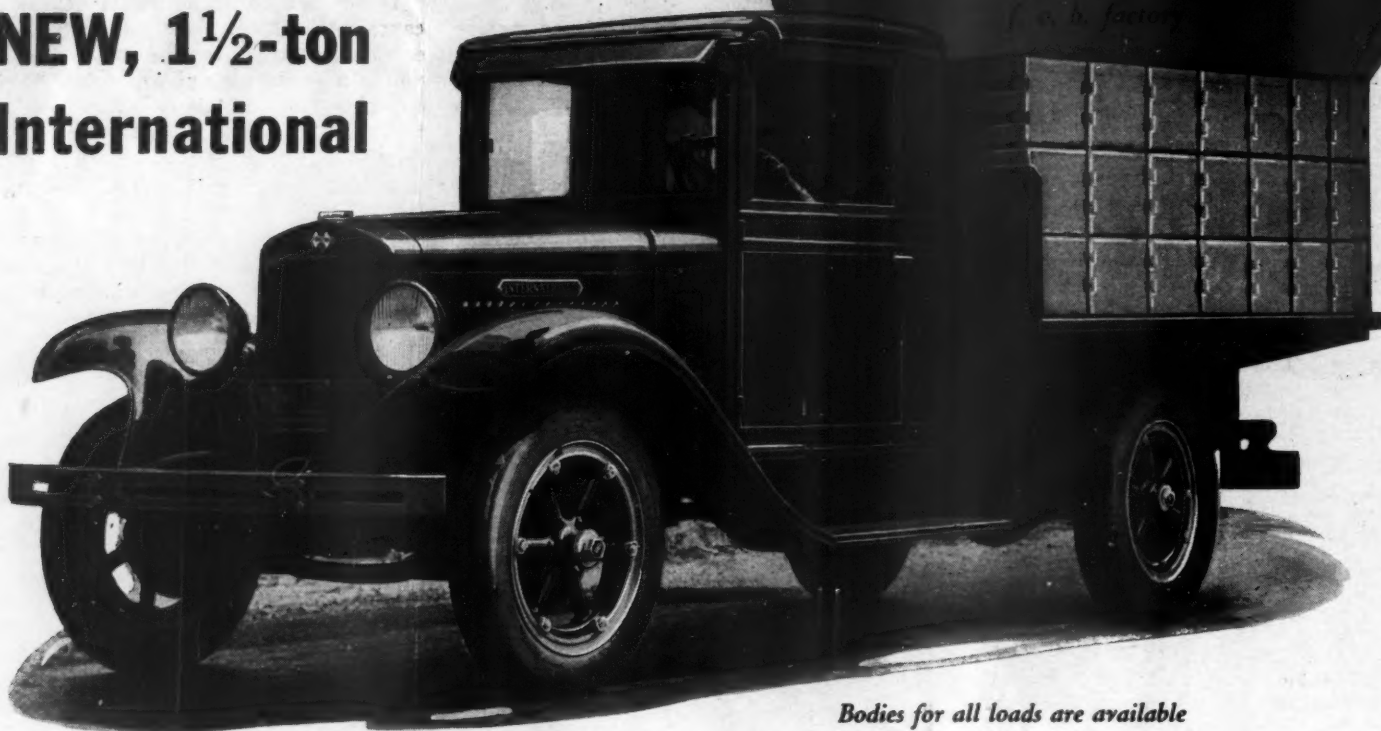
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FRUIT GROWING IN NORTH AMERICA  
COMMON SENSE IN CONTROLLING FOREIGN FRUIT  
AMERICAN FRUIT GROWERS STAND FOR  
THE CONDITION OF COMMERCIAL FRUIT

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# NOW

**True International Quality  
at LOW COST—a Powerful  
NEW, 1½-ton  
International**



*Bodies for all loads are available*



INTERNATIONAL HARVESTER now announces a new 1½-ton truck—the Model A-2. Here is a sturdy, good-looking, fast, and powerful International, ready to handle your hauling with utmost satisfaction anywhere. It has 4 forward speeds, and the 136-inch wheelbase chassis is now available at \$675 f. o. b. factory.

The Model A-2 is a better truck with more power than we have ever been able to offer at this low price. It is a true International from front bumper to tail-light—a truck of the same high quality and backed by the same Company-owned service that has made Internationals famous for low-cost hauling.

This new International will give you a new

idea of power, speed, stamina, attractive lines, and all-around dependability. It will also give you absolute assurance of low upkeep expense and unusual operating economy over a long period of years—and that is vitally important.

Ask a dealer or a nearby International branch for a demonstration of the new Model A-2. Drive it. In no other way can you appreciate the quality that has been built into the Model A-2. It is another International achievement that will add to the ever-increasing popularity of the International line. Other Internationals are built in ¾-ton to 5-ton capacities. A size and type for every business. Make it a point to see the International Model A-2 at your first opportunity. Folder on request.

**INTERNATIONAL HARVESTER COMPANY**

606 S. Michigan Ave.

of America  
(Incorporated)

Chicago, Illinois

**INTERNATIONAL TRUCKS**

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# AMERICAN FRUIT GROWER

VOLUME 51

JULY, 1931

NUMBER 7

## INCREASE FREIGHT RATES?

**THE STEAM CARRIERS**, through the officers of their three associations, have petitioned the Interstate Commerce Commission for permission to put into effect a horizontal increase of 15 per cent in the tariff on all classes of freight.

It is claimed by the spokesmen of the railroads that such increase is made necessary by the shrinkage in volume of freight business which has reduced the earnings of the companies down to a point where the standing of their securities as investments for certain classes of funds is imperiled.

That the earnings of railroads stand in need of augmentation is not seriously to be contested. But that any increase in freight rates on agricultural commodities, especially on fresh fruits and vegetables, is likely to improve the earning power of the carriers is open to doubt.

Lack of enterprise alone has lost much of the short-haul business in perishables to the motor trucks. How much more of this class of short-haul traffic would be diverted to the highways by a 15 per cent rate increase requires little figuring.

But the long-haul traffic in perishables would face disaster, except where water transportation is practical and available. A few examples of the effect of a 15 per cent rate increase on long distance shipments will serve to illustrate:

A car of 372 boxes of Florida grapefruit, after paying \$374.98 in freight charges to Chicago, returned \$542.52 to the shipper, or \$1.46 a case. His cost of \$1.25 for harvesting and packing expense, including package, leaves him 21 cents for the fruit. A 15 per cent freight increase would take 15 cents, leaving him six cents.

A car of 756 boxes of Washington apples, after paying \$629.78 freight, returns the shipper \$836.13—\$1.10 a box. If his costs to the car door do not exceed 95 cents, the shipper has netted 20 cents a box for his fruit, which the proposed increase would reduce to seven and a half cents.

A car of 560 crates of California cantaloupes pays \$371.19 freight to Chicago. The shipper gets \$245.65. The 15 per cent increase in this case would wipe out the grower.

These are random cases at normal prices for the commodities, taken from the books of one of the largest Chicago commission houses. They fairly reflect the havoc the proposed increase would play with shipments of perishables.

According to a statement issued by the National League of Commission Merchants, the freight charges on perishables in 1930 amounted to 54.91 per cent of the farm value of those shipments. With the lower level of prices for fruits and vegetables in 1931, and with the same freight rates, the percentage of the grower's dollar consumed by freight charges will be much higher.

An increase as proposed would be disastrous to the commercial fruit and vegetable business in areas remote from markets.

It would have the effect of swinging production into areas within trucking distances of the markets, and would, in all probability, effect a sharp reduction in railroad earnings, rather than an increase.

If the traffic departments of the steam carriers would exercise the same degree of enterprise as have the truck lines, and would install a pick-up and delivery system, utilizing trucks where more economical, they would be far more likely to note an increase in earnings than to attempt to raise costs in a period of lowering price levels.

It might also not be out of place to study railroad payrolls in the light of lower living costs, to determine whether a practical saving cannot be effected at that point.

## KEEP "UNDER GRADES" AT HOME

**THE WISDOM** of sending to market only the higher grades of fruit this season is being emphatically proved by daily experience in the metropolitan wholesale markets.

Southern peaches, at this writing, are arriving in heavy volume. Most of the arrivals represent fruit of good size and quality. This stock is passing into consumption at prices rather above the expected. This may be due to the slightly improved financial and employment situation and to a generally perceptible upturn in spirit.

Wholesalers, commission merchants, are generally keeping the poorer peaches out of sight. If retailers want the smaller, less presentable peaches, such are to be had. But no attempt is made to push their sale. Some of this stock may sell for enough to pay commission and freight. Much of it will not.

There is, this season, no place on the larger markets for under grade fruit, and little prospect of any place. Except as a measure of orchard sanitation, unless a local market can be found for fruit that has not been intelligently fertilized, thinned, cultivated and sprayed, such fruit should be left on the trees.

To pick, pack and ship it to any distance is more likely to bring a bill for the freight than the cost of the baskets.

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## BUSINESS OFFICES

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TULSA, OKLA.....2607 N. Boston Pl.

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Associate Editors  
T. J. TALBERT W. C. O'KANE

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# Startling Money Saving Offer

for "Poultry" Classified Advertisers

THREE big poultry and farm magazines  
have joined hands to give you

## The BIGGEST BARGAIN In Classified Advertising EVER OFFERED

This special hitherto unheard of low rate applies only to classified advertisements of:

Breeding Stock  
Baby Chicks  
8 Weeks Pullets  
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Poultry Feeds  
Poultry Equipment

Poultry Remedies  
Brooders  
Turkeys  
Rabbits

Fur Bearing  
Animals  
Pet Stock  
Pigeons

If your advertising qualifies, you should lose no time, but send your order today. Think of it! Only

### 20¢ a word for 450,000 combined circulation

Every one of this vast army of 450,000 subscribers to these three big magazines is a potential customer for YOU. Each magazine serves a separate and distinct field but "poultry culture" is the common denominator of each.

**POULTRY CULTURE**, formerly "OK" POULTRY CULTURE is the leading poultry magazine in its territory—the great poultry raising states of the Southwest where 77% of its 150,000 circulation is concentrated. It alone is a splendid puller for poultry advertisers at its regular rate of 15 cents a word.



150,000 Copies Monthly  
Regular Rate 15c a word



**AMERICAN FRUIT GROWER** is too well known and long established (1880) to need much description. A recent survey of a cross section of subscribers showed the average number of chickens raised per year per subscriber is 165. Here's a market worth cultivating; practically a virgin field for you "poultry" advertisers. Start cultivating it now.

250,000 Copies Monthly  
Regular rate 20c a word

**AMERICAN THRESHERMAN** is the only farm magazine in its field—those prosperous and progressive farmers who use farm power equipment in their operations. They also raise poultry. Their average income is head and shoulders above that of the ordinary farmer. Here's another new market awaiting your cultivation.



50,000 Copies Monthly  
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Total word rate . . . \$0.47  
Special Combination rate . . . .20  
You SAVE per word . . . .27

### PROMPT ACTION IS NECESSARY

FILL IN—MAIL THIS CONVENIENT ORDER FORM TODAY

Date.....1931  
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**Yes** I want to profit by your money-saving, startlingly low rate of 20 cents a word for the 450,000 circulation of **POULTRY CULTURE**, **AMERICAN THRESHERMAN** and **AMERICAN FRUIT GROWER**.

Please publish my classified ad in these three magazines times starting with the August issues. I understand my ad must start in the August issues to be entitled to this bargain rate. Also I agree to use a classified ad in consecutive issues for the number of times indicated above in order to enjoy this special rate regularly but not for more than 12 times—one year.

I enclose remittance of \$.....to pay for my.....insertions. If I have not remitted for the entire contract you may bill me in advance for later insertions which I agree to pay promptly upon receipt of invoices.

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Name.....

Local Address.....

Post Office.....State.....

Attach Copy to  
Separate Sheet

SAVE MONEY—Get Greater Profits—MAIL TODAY

## SMALL BOX OF APPLES CATCHES PUBLIC'S FANCY

By M. B. CUMMINGS

THIS IS a delicatessen store age and the farmer is learning lessons in marketing his crops by studying the buying habits of the lady who trades at the corner store.

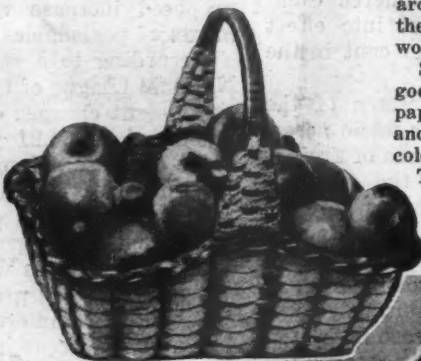
Take apples, for instance. No longer do orders come for barrels of apples to put in the cellar. Apartment-house dwellers don't keep barrels of anything in the cellar. The farmer has learned that it is the small

tions and compartments for each individual apple.

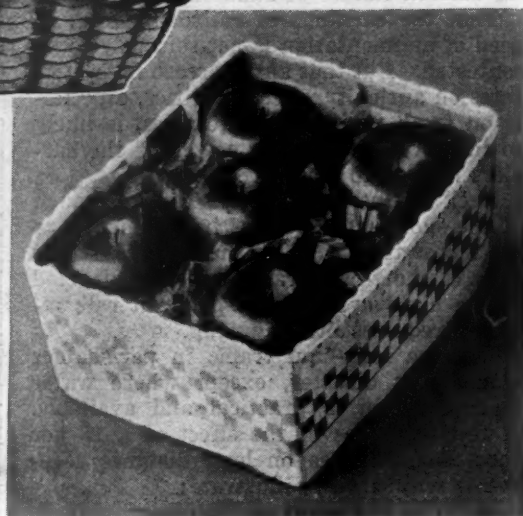
The use of special papers around apples enhances the beauty and the sales value. Moreover, the use of waxed or oiled paper of different colors, such as red, green, white, and purple, if scattered sparingly over the top, adds to the beauty of the package and its contents. And then, finally, if a little lace paper is placed around the outside or the inside of the carton, the package seems to be worth about twice as much—and it is.

Shredded paper, green in color, goes well with red apples, and red paper goes well with green apples, and purple paper harmonizes with the color of most apples.

There is growing up in Vermont a



The handled basket is so handy that it travels along into the consumer's hand.



A little box of five McIntosh that catches the public eye and encourages a sale.

package of apples dressed up prettily that brings the money.

He has found that the public's taste has changed in apples as in candy. Once upon a time people would buy candy rolled up in brown paper or put in a manila bag, but now they want it in a fancy box with a little lace paper inside for lining, a picture of the chocolate girl on top of the cover, and a red ribbon around the box.

Forty cents' worth of chocolates may look like a \$2 box, and the consumer does not hesitate to pay a fancy price because he gets pleasure and value received. Woman wants but little in this world, but she wants it nice. Quality rather than quantity counts.

The farmer finds that people will pay more, generally speaking, for a very few choice apples or those to be eaten out of hand than for a larger quantity of mediocre ones. This is especially true of dessert apples. The small package takes well, and, as salesmen say, "it moves quickly." Many people do not want to buy a barrel of apples, or even a bushel box, at one purchase, but there are hundreds who will buy a little carton containing 16 or 32 apples.

At our College Fruit Show special attention was paid to the fancy package and how to use it. Apples were packed in small cartons ranging in size from those containing five apples to those containing 75, the latter being a bushel, and there were parti-

practice of selling apples in small packages and making delivery direct to the consumer, either by parcel post or by express, especially during the holidays. One Vermont fruit grower offered to sell and deliver 32 beautiful, luscious McIntosh apples for \$2. This is a fancy price, but the quality is also very special.

A single advertisement in one of the metropolitan papers brought responses from customers in most of the States east of the Mississippi River, and a few orders came from west of the Rockies. It pays to advertise, the farmer has found. It also pays to make an appeal to the high-grade customer. It takes more time to market the small packages, but the returns justify the extra care taken to do the work right.

The middleman's profits are sometimes seemingly exorbitant but he knows how to cater to the public in a nice way. He takes time to do it. Fruit growers are also beginning to make their appeal direct to the consumer. Selling fancy fruit is anybody's job if he can do it and do it right.

"Marketing Apples Grown in the Cumberland-Shenandoah Region of Pennsylvania, Virginia, and West Virginia," has been issued as Technical Bulletin 234 by the United States Department of Agriculture. The survey was made in co-operation with State agricultural colleges in the three States.



# FRUIT GROWING IN SOUTH AFRICA

By W. L. SPEIGHT

ALMOST from the time the Cape was first settled, fruit growing has been carried on, but it was not until the last few decades of the 19th century that production on a large scale was attempted. By that time a great deal had been learned about the soils in the Western Province of the Cape of Good Hope, where for many years now the production of such soft fruits as grapes, peaches, plums, pears and apricots has been considerably in excess of local needs.

This region is within the winter rainfall area and leads the whole of South Africa in the commercial production of fruit, a fact that has won for it the term, "the fruit garden of the Union." In addition to the fruits mentioned, the Cape province also exports to Europe and other parts of the Union quantities of nectarines, oranges, naartjes, pineapples and melons. The principal fruits of the Transvaal are citrus — oranges, naartjes, lemons and grapefruit. Mangoes and peaches are also grown. Natal favors the growth of bananas, avo-

cados, pineapples, oranges, naartjes, mangoes and a few varieties of early plums. The Orange Free State is growing increasing quantities of apples, pears, peaches and cherries. Apples for internal consumption are also grown in the Cape. Most of the fruits mentioned comprise the South African export trade with Europe, but other fruits for local use are also grown. These are Cape gooseber-

ries, figs, passion fruit, guavas, limes, litchis, olives, pawpaws, persimmons, prunes, quinces and strawberries.

There is probably no part of South Africa where some sort of fruit cannot be grown successfully. The country ranges

including a factory at which jam and preserves are manufactured. The farms vary in size, 20 to 24 acres being about the average here. Citrus orchards in other parts of the country are very much bigger.

The largest citrus exporting district in Natal is Muiden Valley, which is no more than three miles wide and 15 miles in length. It is about 18 miles from growing Greytown. The three concerns operating here own about 94,000 trees distributed over nearly 1500 acres. Production for 1927 totalled 70,000 cases; for 1928, 100,000 cases, and for 1929, nearly 140,000 cases of exportable fruit.

The South African export trade in fruit dates only from about 1900, when about 300 tons of fruit left the country annually. During the next 10 years some attempt was made to organize the industry, with an excellent result on the volume of fruit exported. From the 2705 tons sent overseas in 1910, the industry now sends out fruit to an annual value of about \$4,000,000.

The export of fruit is regulated by the Fruit Export Act, which became law in 1914. The provisions of this are directed towards maintaining a desirable standard for produce for sale in Great Britain, Germany and other parts of Europe. To avoid shipping waste and inferior fruit, the South African Fruit Growers' Exchange was established in 1921, and serves fruit growers in Rhodesia as well as in South Af- [Please turn to Page 14]



Government wine farm at Groot Constantia near Cape Town.

Top. An orchard at Groot Constantia.

Pawpaws, pineapples and bananas at Duivelskloof, Transvaal.

from the coastal areas, where the main orchards are situated, to high plateaus between 6000 and 8000 feet above sea level. Orchards vary considerably in size. The deciduous orchards of the Cape are in some instances grouped into concerns,

towards maintaining a desirable standard for produce for sale in Great Britain, Germany and other parts of Europe. To avoid shipping waste and inferior fruit, the South African Fruit Growers' Exchange was established in 1921, and serves fruit growers in Rhodesia as well as in South Af-

Most of the fruits mentioned comprise the South African export trade with Europe, but other fruits for local use are also grown. These are Cape gooseber-



View of citrus grove at Muden, Natal.



A vineyard at De Wet at the foot of the Hex River Valley, Cape Province.



View of citrus orchard at Baden, near Montagu, Cape Province.

(Photos courtesy of South African Railways.)

AMERICAN FRUIT GROWER

# COMMON SENSE IN CONTROLLING BLISTER CANCKER

By PRESTON A. NILES

**BLISTER CANCKER**, caused by the fungus, *Nummularia discreta*, is one of the most destructive diseases of the apple. It has caused the loss of thousands of apple trees, just as they were about to enter the period of heavy production. Labor spent in the attempt to eradicate canckers from infected trees has generally proved a great waste of time and money. The disease often spreads through a large amount of the woody tissue of the tree before the characteristic blister canker appears, hence the futility of attempting to control canker by cutting it out. The control, therefore, is a problem of prevention rather than cure. In the purchase of a bearing orchard careful inspection should be made to determine the possible presence of blister canker infection.

It is usually difficult to identify blister canker until it has reached an advanced stage. In the early stages, it may be mistaken for canckers of other diseases or for sunscald, winter injury, blight or collar rot. In the case of more resistant varieties, very sharply defined canckers appear, but

upon such varieties as Ben Davis and Gano, the diseased area is not sharply defined, but blends into the healthy wood. This is due to the rapid spread of the disease and the fact that it progresses more rapidly in the wood than the bark. Diseased spots, when they first appear, vary in size from two to 24 inches long, and from one-half to six inches wide. If the dark bark of the canker is cut away so as to expose the cortex, a characteristic mottled appearance caused by the irregular advance of the disease through the tissues is seen. The bark

is never killed until the underlying tissue is killed.

In the later summer months of July, August and September, blister-like protuberances make their appearance over the surface of the canker. These blisters are from one-eighth to one-fourth of an inch in diameter, circular in outline, and at first only slightly raised. The protuberances soon split open the epidermis, and it rolls back, forming a star-shaped aperture. Blisters so split expose a mass of grayish-tan mycelium and spores.

Cankers increase in size each year until the supporting branch dies. Large limbs, or even whole trees, are girdled and killed. Trees apparently healthy in the spring, and which fully leaf out, are killed later in the season, due to want of moisture and nourishment shut off by girdling. As the canckers become older and larger, the bark

[[Please turn to Page 13]]



Ben Davis tree girdled and killed by blister canker.

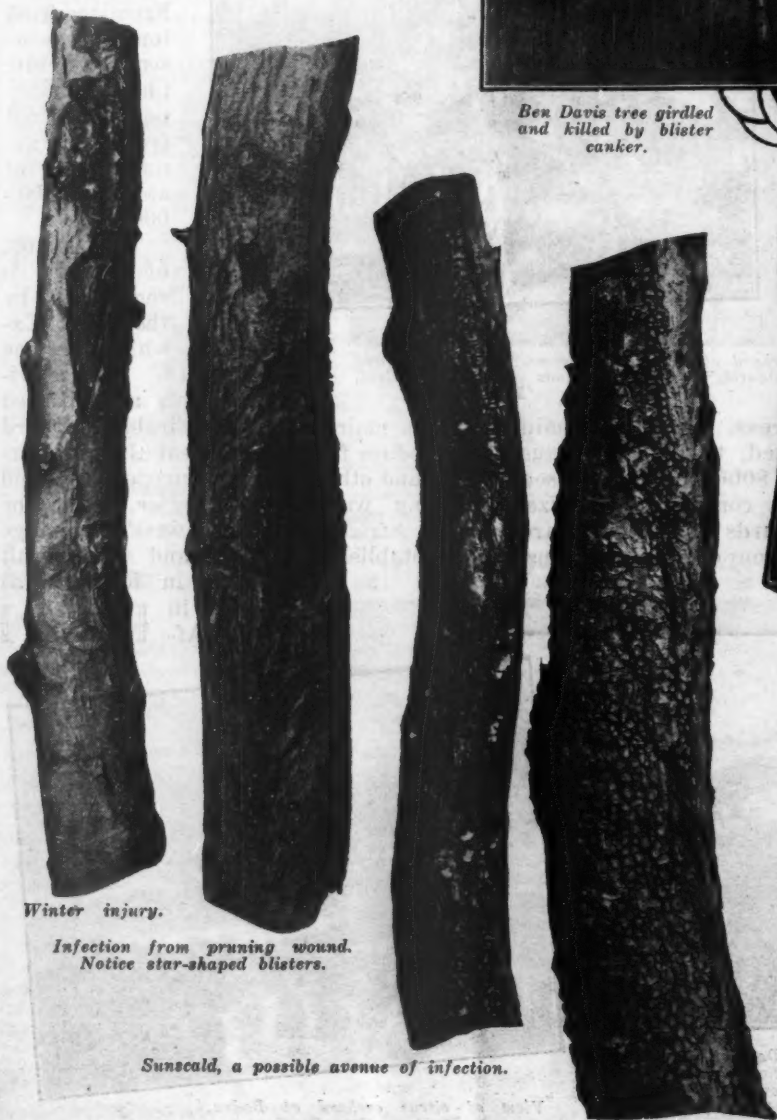


Above: Attempting to save healthy half of tree from cankered half.



Left: Finished treatment of a small pruning wound infection.

Below: Frost cracking, an important avenue of canker infection.



Winter injury.

Infection from pruning wound. Notice star-shaped blisters.

Sunscald, a possible avenue of infection.

Old canker showing stromata or concave "nailheads."



# ALL ABOARD!

for

## PACIFIC NORTHWEST, CALIFORNIA, OLD MEXICO and other famous places WEST

### AMERICAN FRUIT GROWER WONDER TOUR

The Time—10:30 p. m. Standard Time, Saturday, July 18th  
The Starting Place—Union Station, Chicago, Ill.  
The Railroad—The Milwaukee Road

EVERY SIGHTSEEING TRIP is arranged, every detail is complete for the finest tour ever offered readers of an agricultural publication. A large congenial party is already booked, yet there's still room and a hearty welcome for a number of those who have not yet made reservations.

Remember, this is an *all-expense tour*. One lump sum covers all railroad transportation, Pullman accommodations, hotels with bath, meals, transfers, sightseeing trips by automobile, trolley and steamer.

Remember, too, that it's an escorted tour. Experienced travel guides will be with you at all times to relieve you of all bothersome details and see that you get the best of everything. And, once again, remember that this tour is planned to give you 16 days of thrills, adventure and good

times, in addition to the educational value of visits to the West's greatest fruit growing districts.

The first stop is at Wapala, S. D., a quaint village on the Sioux Indian reservation, where Redmen in picturesque costumes will entertain us with ceremonial dances.

The next stop, after we have crossed the Rocky and Bitter Root mountains, is at Ellensburg, Wash., whence automobiles will take us for a thorough inspection of Kittitas and Yakima Valleys, celebrated for fine apples, pears, prunes, peaches and apricots.

Seattle, beautiful metropolis of the Northwest, is next, with ample time for complete exploration. Then away to Mt. Rainier National Park and the grandest mountain in the United States, gripped by gigantic glaciers, girdled by marvelous wild flower gardens and majestic forests. We'll see charming Tacoma, too, before going southward.

From Portland, City of Roses,

Mexican cafe and market place in Juarez.

we'll motor over the world-famous Columbia River Highway, through the great gorge to Hood River Valley, with its grand snow-capped Mt. Hood and its splendid fruit orchards, packing, canning and dehydration plants.

The following day finds us at Medford, Ore., exploring the noted pear, peach and apple lands and the vineyards of the Rogue River country.

California! Our first stop is at delightful Oakland, whence we cross the superb bay to wonderful San Francisco. While our time will not permit seeing everything of interest in the city, we'll take in Golden Gate Park, the Presidio, Cliff House, the business district and, at night, mysterious Chinatown.

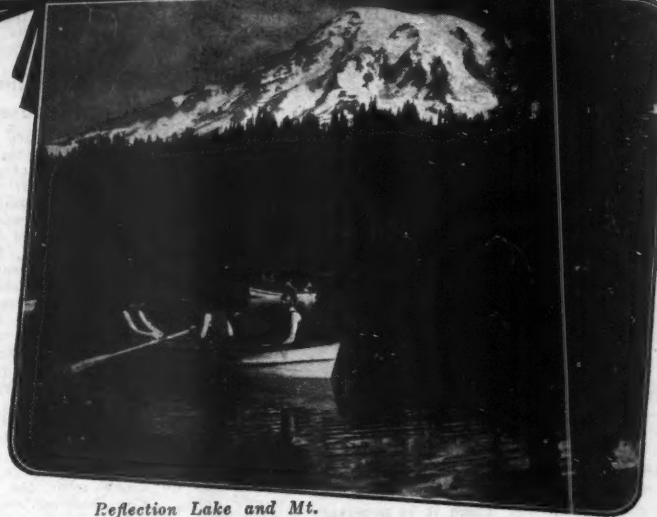
The morning after leaving the Golden Gate, we'll be at lovely Hotel Del Monte beside the deep blue waters of Monterey Bay. Historic Monterey, more Spanish than American, Carmel and its wonderful old Mission will be included on our 17-mile motor drive.

Another morning, and we'll be basking in the balmy sunshine of

**[[ Please turn to Page 15 ]]**



Observation car of special excursion train.



Reflection Lake and Mt. Rainier.



Bay of Avalon, Santa Catalina Island.





# QUESTIONS AND COMMENT

Conducted by T. J. TALBERT

Questions on fruit growing problems and on general horticulture will be answered through this department if of general interest. For reply by mail enclose 2c stamped envelope (air mail 5c). Address AMERICAN FRUIT GROWER, 53 West Jackson Blvd., Chicago.

## Unfermented Apple Juices

If it is not asking too much, would appreciate your giving me information regarding keeping apple cider sweet, also how to make champagne cider.—J. H. C., Canada.

In order that you may have as complete and definite information stated in as brief a way as possible regarding the processes for preparing unfermented apple juices, we quote as follows from United States Department of Agriculture Farmers' Bulletin No. 1264:

(1) Select sound, well-matured, properly ripened fruit.

(2) If different varieties are available at the same time, blend them in proper quantity to give a well-balanced cider of good flavor.

(3) Wash and sort the fruit, trimming or discarding all specked or partially decayed apples.

(4) Grind and press, subsequently repressing the pomace.

(5) Place the juice in deep containers in a cool room over night, to allow the settling out of the pomace.

(6) Siphon off the juice from the sediment.

(7) Place the juice in suitable sterilized containers, seal with sterilized tops, and submerge in cold water in the pasteurizer. Bring the temperature to 175 degrees Fahrenheit and keep it at that point for the prescribed time. (In pint jars or bottles this time will be about five minutes; in quarts and half gallons, 10 and 15 minutes, respectively; in one-gallon bottles, 20 minutes; two gallons, 25 minutes; and five gallons, 45 minutes. In order to determine the length of time for which it is necessary to hold the temperature of the pasteurizing tank at 175 degrees Fahrenheit after it has reached this point, add 10 minutes to the figures given above for the size of container being used and keep the bath as nearly at 175 degrees as possible for that length of time.) Or (second method) pasteurize at 175 degrees Fahrenheit by passing the juice through a continuous pasteurizer, placing it in sterilized containers, and sealing immediately.

(8) Store the juice in a cool, dark room until settling is completed (two weeks to four months). For home use juice may be left without further treatment until used, if preferred.

(9) a. Siphon off from the storage containers. b. Blend, if juices pressed at different periods are being used. c. Clarify further by passing through a pulp filter, milk separator, centrifuge, or flannel filter bag.

## Budding Peaches on Apricot Stock

I have noticed several advertisements of local nurserymen the past fall and winter of peaches budded on apricot stock in place of the usual seedling peach or almond (bitter) stock. Can you recommend this practice or is it in the nature of an experiment yet? It is claimed the trees are thriftier, freer from root knot, and longer lived.—E. J. C., California.

As you suggest, the practice of budding peaches on apricot stock is more or less in the experimental stage. It is possible, however, that there are some virtues in the practice.

## The Insoluble Arsenic Does the Work

I understand from the farm agent, and also from a chemical supply representative, that in arsenate of lead the water soluble arsenic (usually less than 0.5 per cent) is what does the killing of insects. Then if this is the fact, what is the use of the large amount of insoluble arsenic?—T. J. B., Kansas.

It is true that the water soluble arsenic in lead arsenate generally runs about

0.5 per cent. This amount, however, is not entirely responsible for the killing of insects; in fact, if the manufacturer could reduce the amount of soluble arsenic to even a lower figure, perhaps the lead arsenate would be all the more desirable for spraying purposes. This is true because we depend mainly upon the insoluble part for the killing of insects, as the arsenic becomes soluble in the digestive tract of the insect.

Moreover, as you know, it is the soluble arsenic that usually causes the russetting or burning of fruit and foliage.

For this reason the manufacturer reduces the soluble content to the lowest possible amount, and we depend upon the insoluble quantity for the destruction of insects.

## Municipal Water Pressure Insufficient for Spraying Purposes

I have a five-acre orchard bounded on the east by a street of this village, and sloping west from the street about two feet to a hundred feet at the north and south edges, and about four feet to a hundred feet down the center. That is, the general lie of the tract is a slope to the west from the street, but there is a natural trough-like depression, dividing the surface into two slopes toward the center, or middle, respectively, from the north and south. In the street runs the electric line which serves my house and other houses northward. A municipal water main is soon to be laid in the same street for service to the same properties.

I want to take every advantage of these two services for spraying, if not for cultivating, this tract, and am wondering if I could not rig up a spraying system to do away with the ordinary power spray. For instance could I not establish in the center of the tract a tank to do the work of any ordinary tank, letting the municipal water and pressure do the work through extensions of the pipes or hose connected on proper nozzles? I can see through it in every way except to get the spray materials mixed under the municipal water pressure.—E. R. H., Iowa.

In all probability your city water pressure will not amount to more than 45 to 50 pounds, which would not be sufficient for good spraying work.

Considerable difficulty, as you have pointed out, is likely to be experienced in working out a method of mixing the spray materials under the municipal water pressure. It is suggested that you secure an auxiliary spray pump and such accessories and equipment as needed for your particular spraying project.

Perhaps any of the leading spray machinery manufacturers would be able to give suggestions regarding the installation of an auxiliary pump and the necessary equipment to handle your spraying work. Moreover, a representative from the company would perhaps be more than glad to come to your place to give instructions and superintend the proper installation of such equipment.

## Fire Blight on Apple Trees

My apple trees were full of bloom but I notice that only a few apples have set, the blooms having wilted on most of the trees. What is the cause of this? What spray would protect the apples that are now on the trees? I am sending specimen for examination. I have sowed this plot in Korean lespedeza. Do you advise this for soil improvement in an orchard? Any information you may give will be greatly appreciated. If this is blight that is affecting these trees, what would be the best thing to do for it?—B. H. M., Kentucky.

An examination of the apple blossoms and twigs which you sent shows an infection of the bacterial disease of apples and pears known as fire blight.

There is no specific remedy that may be applied at once to bring the disease under control. The measures employed by good fruit growers are as follows:

(1) Cut out and burn during the win-

ter season as many of the blight cankers or blighted branches on apples and pears as possible. This tends to rid the premises of the source of the disease.

(2) During the following spring, spray the trees carefully and timely for any insects that may carry the disease, and thus prevent to some extent the spread of the malady.

(3) Control the growth of the trees. It is advisable, of course, to maintain sufficient growth for health, vigor, and production but not beyond this, as a rapid succulent vegetative growth usually blights worst. More emphasis usually should be given this factor in the control of blight.

(4) In making a new plantation of apples and pears, where blight is prevalent the grower should use the more resistant sorts or varieties.

It is possible that Korean lespedeza may be a satisfactory and suitable cover crop for your orchard. This will be particularly so if supplemented by applications of readily available nitrogenous fertilizers like nitrate of soda or sulphate of ammonia, applied around the trees in the springtime about two weeks before the blooming period.

## Suitable Evergreens for Swampy Land

What kind of evergreen tree, suitable for a Christmas tree, will thrive on medium swampy land? In the spring it is rather wet until the last of June and then dries out for the summer season so that one can walk on it without getting one's feet wet. Don't you think that it is advisable for orchardists to grow Christmas trees if they have available land?—R. B., Massachusetts.

The Southern White Cedar, Northern White Cedar, Tamarack, Southern Cypress, and Black Spruce generally succeed and occur naturally in very swampy areas. It is not suggested, however, that very swampy areas be planted to evergreens, because too little is known of the probable success which would attend the venture.

Christmas trees should be given more care and attention than the ordinary forest plantation. To be successful the trees should be set out on land prepared by plowing as for any field crop. Moreover, cultivation for the first two or three years should prove profitable. As the trees will not be grown for more than five to eight or at most 10 years, they are generally set out at the rate of about 5000 per acre. A triangular spacing of three by three feet is often employed. This will give about 5600 trees per acre. Trees are also often planted four by four feet to enable cultivation, giving 2700 trees per acre.

In your section the trees most likely to command the highest prices are perhaps the spruces and firs. These cannot be grown everywhere, but where they can they would be the logical choice for planting. In all probability the Norway spruce for your locality is preferable to other spruces, because it grows more rapidly. If your soil is not too swampy, it is possible that Norway spruces would be satisfactory.

## Driving Nails Into Tree Trunks to Induce Bearing

In the April issue I noted where a fruit grower asks about slag for fertilizer or as a help to make trees bear fruit.

I have my doubts about basic slag correcting the fault. Your idea of slowing down the growth is one way of helping to bring them into better bearing. But I have a remedy that will absolutely make them bear fruit.

In 1917 I rented a small place of eight acres from a widow nine miles out of Portland, Ore., for a term of three years. There were some 50 apple trees in an orchard south of the house that bore a

good crop of fruit nearly every year. But on the north side of the house, about 300 feet away from the orchard, on a darker, heavier soil, stood one lone Gravenstein tree 15 years old. When I leased the place the landlady told me I might as well cut that tree out as it had never borne more than six or eight apples in any previous season. I asked her to let me experiment on it for a year and she said, "Pook, I suppose you will bury a lot of old iron and such around the roots, but go ahead." So I did.

Just as the sap was coming up I took my hammer and 65 eight penny nails and drove them into the trunk of the tree and on the underside of the largest limbs as far up as I could reach from the ground, zigzagging them all around and driving them in so the heads of the nails were just flush with the bark.

That year the tree produced 17½ boxes of fine Gravensteins and they were all of good size and rich color. The tree is still fruiting.

I have also tried this remedy on pear and sweet cherries with the same gratifying result.—A. F. S., Oregon.

Your description and treatment of the Gravenstein tree brings up the much discussed question of driving nails into fruit trees to induce bearing. The wounding of the fruit tree by driving in nails in the manner described is one way of girdling the tree. For girdling to be effective in slowing up the growth of the tree and tending to increase fruitfulness, it should be so timed that the resulting check in growth is of short duration. Moreover, it is important that the check in growth come at a time when increased accumulation of food material in the tree may result in fruit bud formation. Much experimental evidence tends to show that the best time for the girdling work is about one or two weeks after the petals fall from the apple trees. At this time perhaps one-half of the fruit spurs will have finished their growth for the year and the other half will still be in a growing condition.

Girdling instead of driving nails into the tree is suggested, because there is much less likelihood of the introduction of diseases through the girdling or "scoring" method.

In "scoring" the knife should be drawn around the trunk or main limb in such a way as to cut through the bark into the wood. Wounds made in this way leave a small opening and the minimum opportunity for disease-producing fungi to enter. To prevent the introduction of disease, melted paraffin is often applied to the wounds made.

We believe that the girdling or "scoring" method has many advantages over the old system of driving nails into the trunks of trees and suggest its use where it seems advisable as a result of a heavy vegetative growth to adopt such a practice.

## Dropping of Plums

Will you kindly tell me what makes my plums drop off the trees? The trees look healthy and the plums are very nice. When they begin to turn purple, the fruit falls off.

If the ground is inclined to smell sour, can one use ashes mixed well with the dirt when planting potatoes?—A. F. L., Massachusetts.

In all probability your plums are affected by the fungous disease known as brown rot.

The remedy is proper and timely spray applications. It is suggested, therefore, that you write to your own Agricultural College, Department of Horticulture, at Amherst, Mass., for information relative to spraying peaches.

If your soil is acid, no doubt the same can be corrected by the application of limestone at the rate of three or four tons to the acre. It is also possible that the plowing under of a leguminous crop like clover, alfalfa, vetch, or rye might help materially in the production of potatoes. It is doubtful whether the incorporation of quantities of ashes mixed with the soil would be of material benefit.

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# MONTHLY FRUIT and VEGETABLE REVIEW

By PAUL FROELICH

BUREAU OF AGRICULTURAL ECONOMICS

**CARLOT MOVEMENT** of the principal fruits and vegetables was very active during June, sometimes exceeding 20,000 cars per week, or 7% more than during the same period last year. Old-crop apples were about finished and the new crop was getting under way. Early deciduous fruits were moving actively from California and a few other States. The western pear season also was about to open.

Strawberries were finishing a fairly successful season. Movement of watermelons was becoming heavy and was mounting toward its early-July peak. Imperial Valley of California moved a large crop of cantaloupes at disastrously low prices. The Arizona cantaloupe season was scheduled to open during late June. Peach arrivals were becoming numerous, and a large crop is expected this year. The Florida citrus season was closing with a high record of shipments.

Potato shipments were extremely heavy and prices low. Other vegetables were plentiful. A large crop of tomatoes was moving to market from Mississippi and Texas. In general, supplies of practically all products have been abundant; demand has been only moderate, and values have been mostly below those of 1930.

## Peaches Plentiful

Condition of the peach crop on June 1 indicated a total production this year of possibly 78,000,000 bushels, or 46% more than last year's light crop. Almost 19,000,000 bushels were credited to the 10 southern States, which is a very great increase over their 1930 production of some 10,000,000 bushels. Georgia, North Carolina and Arkansas expect very good crops, but Oklahoma and Texas peaches were hit by freezing weather. Georgia alone may ship 14,000 cars, as against 8630 during the 1930 season.

California expects 21,500,000 bushels of clingstone peaches, or slightly less than last year's heavy crop, but the expected 8,875,000 bushels of freestone peaches is about one-sixth less than last season. However, the California peach crop will still be 50% above the five-year average figure. Washington expects a 50% increase over last season's light crop, and Utah may have two-thirds more peaches than in 1930. Oregon looks for a considerable decrease this season, while Idaho will have a crop far above average size. Prospects in Colorado are for a very heavy crop of peaches.

Illinois last year had practically no peaches, but this season expects more than 4,000,000 bushels. Ohio, Indiana, Pennsylvania, and New Jersey also look for large crops, but New York will have a considerably lighter production than in 1930. Michigan probably will have three times as many peaches as it harvested from the short crop of last season, and Missouri shows a very large increase. Shipments of this fruit had become quite active by mid-June, but as yet were only half as heavy as a year ago. California and Georgia together were shipping about 15 cars daily, and a few other States were beginning to market their peaches. Movement should increase sharply during July.

## Apple Prospects Good

Condition of the apple crop in June was about 76% of normal, which is much higher than in recent years. There was every indication of a large crop. Compared with last season, conditions in northeastern and western States were slightly better, and in the central and southern States prospects were for heavy production in contrast with short crops of a year ago. The shipping season for 1931 apples opened shortly after June 1, with a few carloads from northern California and Illinois. Movement of 1930-crop apples from storage increased temporarily to 335 cars during the first week of June, about 260 of which came from Washington. Prices were fairly well sustained toward the end of the season.

## June Holdings Heavy

Total cold-storage holdings of apples on June 1 were equivalent to 578,000 barrels, which is 28% more than at the same time in 1930 and about 11% above the five-year average for this month. Holdings in barrels were reduced to low point of 38,000, compared with 96,000 a year ago and a five-year average of 155,000 barrels. On the other hand, there were still 1,428,000 boxes of apples available, mostly in Pacific Coast States. The supply of boxed fruit was 88% greater than that of June, 1930, and was 61% above the average figure. The 192,000 bushel baskets still on hand at the opening of June were 38% fewer than supplies in baskets last spring and about 10% below average for this time of the year.

## Fewer Pears Expected

Pears likely will be above the five-year average figure but one-seventh lighter than the 1930 crop. A total of 23,572,000 bushels is expected. California may have at least 9,000,000 bushels of this total, Washington 3,150,000 and Oregon 2,310,000 bushels. Combined production in the Pacific Coast States is expected to be about one-fourth lighter than last season. Colorado, on the other hand, expects three times as many pears as in 1930 and somewhat more than average. A very light crop is forecast in New York and a relatively small crop in Michigan, but Illinois expects an unusually large production of pears. The shipping season in California was expected to open shortly after June 15. A few carloads of 1930-crop pears were still moving from storage.

## Cherry Crop Irregular

Cherries in all the western States except California had a generally less promising outlook than in either of the past two years, chiefly due to frost and wind damage. With the exception of sour cherries in New York, this crop appeared to have more favorable chances than a year ago in the eastern and central States. General condition of the cherry crop on June 1 was 67% of normal, compared with 59% a year ago. The California shipping season was waning and only 20 cars a day were moving during mid-June. But the season had opened in Idaho and other States will soon begin.

## Plum and Prune Prospects

Condition of these fruits was ex-

tremely variable in different localities in Washington and Oregon. While June condition was reported moderately better than a year ago in the Northwest, it was substantially lower than two years ago. A combination of weather factors—frost, wind and dust storms—is held accountable for the damage. Lower condition was reported for drying prunes than for the crop to be marketed fresh. In California a relatively good crop of plums is expected, but prune production will be much lighter than the large crop of 1930. Shipments of this fruit to date have been about 70% greater than to the same time last season, with California output averaging 60 cars daily during the middle of June.

## Citrus Fruits Decline

The condition of citrus fruits declined greatly during May. Much of the heavy bloom failed to set. Condition declined 9 points on California oranges, 14 points on Florida oranges and 12 points on Florida grapefruit, compared with the usual decline of 3 or 4 points during May. California lemons showed an average decline for the month. Navel oranges have set very irregularly in California, but Valencias are apparently holding a good set. June 1 condition of all California oranges was 80% of normal, as against 95 a year ago, and Florida oranges averaged only 75% of normal, or 5 points below the figure for June 1, 1930. Grapefruit in Florida showed a condition only 65% of normal, compared with 81 last year.

Total carlot movement of oranges recently has averaged only 200 cars daily, mostly from California. Grapefruit, chiefly from Florida, was down to 50 cars per day, with light arrivals from Porto Rico and California. The export movement of United States citrus fruits to Canada may be affected by the tariff of 35¢ per cubic foot, placed by that country, effective June 2, 1931. This applies to oranges imported from all countries except those of the British Empire, to which the British Preferential Tariff applies. Oranges are admitted free of duty into Canada from these British countries. On a box basis, the duty is equivalent to about 70¢ for Florida-type boxes and 64¢ for California boxes, calculated on the cubical contents of the boxes.

## Strawberry Season Ending

Although production of strawberries in the intermediate States, which were shipping during mid-June, was considerably lighter than last year, the 10 late States together have an indicated crop of 66,501,000 quarts, or 11% more than in 1930. The increase is due to expected heavier yields per acre this season. Oregon and Washington, when the forecast was made, expected to have much larger crops than last year, but some weather damage has since resulted. The total commercial strawberry crop for shipping and for manufacture is now estimated at 230,621,000 quarts, or nearly the same as last season but still 23% below the five-year average figure.

Growers generally received good prices for berries this season. On the Eastern Shore of Maryland and Delaware, however, the returns in

mid-June had declined to \$1.50-\$3.75 per crate of 32 quarts, compared with \$2.25-\$2.60 per crate of 24 quarts in southwestern Missouri. City prices were moderate. Total shipments had decreased to 200 cars daily and will become lighter as the season wanes. Northern States will become active in late June, but most of their production is consumed locally. Because of the very heavy shipments from Louisiana, Alabama and North Carolina this season, the total output to June 15 was about 13,500 cars, or 3,000 more than for all of the 1930 season.

## Watermelons Active

Plantings of watermelons have been generally reduced this year. Shipments were delayed from the important southeastern sections and forwardings by mid-June were only about half those of a year ago. The Imperial Valley season was ahead of last year's corresponding record. By the middle of the month, Imperial Valley was shipping an average of 50 cars daily, Florida about 10 cars each day, and Texas 5 or 6 cars daily. Cash prices in Imperial Valley had dropped sharply to \$10-\$12.50 per ton of small-sized melons. The 24 to 30-pound average melons in Leesburg district of Florida declined to an f.o.b. range of \$250-\$350 per carload. Shipments were due to increase rapidly, reaching their annual peak around July 1.

## Cantaloupes Abundant

Imperial Valley of California had a very heavy crop of cantaloupes and similar melons, originally estimated at more than 9,000,000 crates, compared with a harvested crop of 5,750,000 crates in that district last year. Although the first seasonal peak of shipments was passed on May 25, when about 380 cars moved in one day, movement since that time has averaged close to 300 cars and on some days has greatly exceeded that figure. A second and heavier peak was expected during the last week of June. From a financial standpoint, the Imperial Valley season has been disastrous. Cash-track prices of standard crates of 45 melons dropped as low as 75¢ and then recovered to a range of 85¢-\$1, which was still very low. Honey Dews were returning 75¢-80¢ per crate at shipping points. Forwardings of Honey Dews and Honey Ball melons had increased to a daily average of 50 cars by June 10, which is much heavier than movement of a year ago. The season was already getting under way in Arizona.

## Potato Movement Heavy

A few revisions were made in the crop forecasts for early potatoes, with increases for Florida, Alabama and the lower valley of Texas but with decreases for many of the second-early States including Maryland and Virginia. The production estimate for North Carolina, which was the leading shipper in mid-June, was raised to 5,624,000 bushels, while Virginia was reduced to 12,330,000. Total commercial crop in six second-early States is now indicated as 21,396,000 bushels, compared with 22,364,000 in the original forecast. Last year's production in these States was only 19,276,000 bushels. Five

(Please turn to page 12)



per cent of the fruit crop prospect. Last year the yield in the Sandhills was extra good. Practically all fruit was shipped. Prices were good. There were very few culls and the truck movements took care of practically all of the fruit which was not shipped in carload lots. This year the condition of the crop is ideal. We have had no complaints of extensive damage from any source. Insect ravages are reported at a few places, but the condition of the crop at present is as good as the growers could ask for. This condition, by the way, is more or less true for every crop in every section of



the state, possibly more so than for a number of years.

**GEORGIA:** There is no doubt but that Georgia will produce an unusually good sized crop as early season factors were especially favorable. From all available information the May drop of Elbertas was heavy. Too, considerable thinning has been done, as the growers generally realize that fruit of good size and quality must be produced if the heavy crop is to be marketed at a fair price. This means that the percentage of culls this season should be less than usual and with the larger size of fruit resulting from the heavy drop and thinning may mean that carlot production will be greater than prospects of one month ago indicated.

**KENTUCKY:** See comments on Apples.

**TENNESSEE:** Peaches continue in excellent condition with the highest per cent reported since 1924. Untended orchards report some damage from leaf curl, but curculio infestation seems below normal. Some correspondents report such a heavy set that there is a probability of an unusually large proportion of small peaches.

**MISSISSIPPI:** Peaches promise an unusually good crop, especially in northeast and coastal counties. Earlier in the season many growers feared the March freezes following warm weather would cause a heavy drop as took place under similar conditions in 1927, but this has not materialized and a large crop is in prospect.

**ARKANSAS:** In the big Highland section the older trees have undoubtedly declined in productivity and the drought of last year and the severe winter just preceding it killed off a good many young trees. To partially, though not completely, offset these losses, the four and seven-year-old trees will have a larger bearing capacity. Carlot shipments may not quite equal the 4,000 cars of 1928 when estimated total production was 3,000,000 bushels.

**LOUISIANA:** Most peaches grown in this state are white flesh clingstone seedlings. Many of them are coming on the market now and are very sweet and good this year, although rather small in size. We have but few commercial orchards in this state. What few we have are looking good this year, and the crop is fairly promising. Some sections seem to have a larger crop indicated than others.

**OKLAHOMA:** Peaches show some improvement since last month. Growers are in a better position to estimate the crop now since fruit has begun to develop.

**TEXAS:** The crop was a near failure in northern and central districts due to spring frosts. Most all other districts suffered from damage from the spring freezes. Very marked improvement is shown in the peach crop since a month ago. Peaches are sizing up much better than was expected. The large size will offset, to a large extent, the damage done by freeze. The "drop" is practically over and was fairly heavy but there is enough fruit remaining on the trees to produce a fair to good crop.

**IDAHO:** From all reports, peaches will be near a full crop compared with almost a complete failure in 1930, due to winter injury to the trees during the winter of 1929-30.

**COLORADO:** Peach prospects for Mesa county are the best in history. Practically no frost damage. Redlands Mesa, located about 7 miles southwest of Grand Junction, has 270 acres of peach trees seven to eight years old. This district has never produced a good peach crop but this year prospects are that they will ship from 100 to 125 cars of peaches. The crop at present is in excellent condition.

The Palisade, or heavy producing district, has not been affected by frost. New orchards are coming into bearing in this district and it is probable 2,000 cars will be shipped by rail from Palisade this year. Delta county has suffered from several freezes and their crop will be cut in two this year.

The acreage of bearing trees is constantly increasing. Orchard Mesa in the Palisade district has been increasing the bearing trees at the rate of about 500 acres per year for the past three years. No expansion is being made on Redlands Mesa (near Grand Junction) but there is some increase in the North Fork district of Delta county.

**NEW MEXICO:** See Apple Comments.

**UTAH:** Condition figures show wide fluctuation. Box Elder county, for instance, on reports thus far in hand, shows condition figures from 30 to 100; Utah county sends in a peach schedule with a figure as low as 25, while another schedule gives 100. In the higher altitudes (of small production however) frost damage to peaches was extensive.

**WASHINGTON:** The prospect for peaches this year at this time is considerably better than at this time last year. But the crop of 1931 has been sharply reduced by bad weather at pollination time—high winds and dust storms; and also by late frosts in Yakima Valley.

**OREGON:** An unusually low June 1 condition is reported due chiefly to ill effects of May weather, late frosts and wind storms taking a heavy toll. Condition is quite variable but in no case is it very favorable. Willamette Valley: No peaches to speak of. Very poor set, probably 10%. Some trees with no fruit. Hood River Valley: Upland peach prospects ruined by dust storms; on lower lands frost caught them. Umatilla County: For this time of year, appear about up to normal. Umpqua Valley: There are some peaches but not many.

**CALIFORNIA:** Clingstone peaches are again pointed for a large production. The present condition is 85, which for this date indicates a crop of 516,000 tons total production. In other similar years it has been estimated that from 15 to 20 per cent of the total crop developed as number two fruit or rejects at the canning plant. Should this

(To Page 17)

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# **A PLAN OF HAIL INSURANCE THAT WOULD FIT THE NEEDS OF APPLE GROWERS**

AS LONG AGO as I can remember insurance companies had killed about all the hail business in apples by rates that had run up to eight per cent. For a number of years most growers, including myself were without any. Then in about 1925, companies were in the field writing insurance at three per cent and paying losses of all sizes. For the next two years they raised the rate to five per cent, the next to eight per cent, then the next year they put in a clause stating that only losses of 10 per cent or more would be paid. This was the same as another raise in rates. That arrangement has continued in 1930 and is offered for 1931.

The foregoing would indicate that the insurance companies have been mostly guessing at the necessary rate, and have twice run the rates so high that they have not been able to get enough business from an average spread of growers over a large territory to determine a fair, profitable large-scale rate.

However, the 10 per cent clause that has been in the policies for the past two years gives an idea that should be enlarged upon.

Most apple growers, including myself, have no fear of the more frequent light hail storms. We are only concerned about the rare heavy hail. It is plain that many light hail losses, say up to 25 or 35 per cent, take most of the premium money that insurance companies collect.

Please understand that clauses of policies, should they be 10, 25 or 35 per cent, do not mean that those amounts are deductible from payment of losses that might occur with such policies. The whole per cent of loss is paid should the loss equal or exceed the per cent clause written into the policy, while no loss is paid if it is less than the stated per cent clause. The apple grower would pay a graduated premium of his choice running lower as the liability of the insurance company to great numbers of small losses was eliminated.

If the hail insurance companies want an apple hail business that amounts to something, they should take up this idea. They probably have a record of all losses paid for the several years back from which they could figure what rate would be necessary for losses which were to be paid, running 10 per cent or over 25 or 35 per cent.

From all that I have been able to learn in my own business and in observing others, the individuals that are sure to prosper are those selling services or commodities that fit the need of their customers. Hail insurance companies have made up expensive policies without any real study of the apple grower's need and have killed what could be an enormous business spread safely over great territory, that would truly reflect the necessary rates.

A few apple growers, like myself, buy their policies in a meager way at great cost because we are afraid only of the rare, heavy loss.

For the few seasons I have been buying policies ranging from \$7,200 to \$10,000 at premium costs of \$576 to \$800 when I should have carried policies ranging from \$15,000 to \$25,000 for any real protection against rare heavy loss.

I will endeavor to summarize information regarding apple hail insurance that I gathered while visiting orchards in many States in the summer of 1930. Many apple growers from Michigan, Ohio, Indiana, Kentucky, Illinois, Iowa and Kansas were interviewed on the desirability of the insurance companies offering hail insurance against the rare, heavy losses at low rates.

I talked with every grower that I could come in contact with in the above States and almost to a man they enthusiastically favored the idea here described as a plan well suited to their needs. Most of them are now without any hail insurance. They said that they could not afford the rates that now seem to be necessary for protection against the many small losses. They are concerned about protection from the rare heavy loss only. There is no reason why

such protection could not be offered at a low rate.

The few, two or three, apple growers that were not interested in this plan were generally disgusted with all hail insurance.

If the hail insurance companies are going to try to fit the needs of the apple growers, here are some things in the policies that should be changed even at the cost of higher rate if necessary.

Until two years ago, the policies read that the hail insurance was in force as soon as the fruit set, then it was changed to read 90 per cent of the apples one-half-inch in diameter. That clause now exposes the apple growers' crop for two or three weeks. That is wrong, for we want protection from the time the apples are of size enough to carry a hail mark.

For south Iowa, Nebraska, North Kansas and Missouri and south Illinois the expiration date should be October 20, instead of October 15. If the apple grower is going to pay out good money for protection, he wants protection from the time the apples are on the trees until they are off.

The policies state very clearly what the grading rules are in case of loss but lack a statement of what the procedure will be in a hail severe enough to cut most of the apples from the trees, so that it is impossible to get crop injury percentages from the trees only.

Now is the time to make the hail insurance policies fit the apple grower's needs and make rates accordingly.

As I see it, right now is the last chance for the hail insurance companies to regain the confidence of the apple

growers and prove themselves useful. Stock insurance companies are organized to make a profit. No line of business ever had a greater opportunity to go out and get the large volume of business, necessary to profit, and with spread enough for safety to the companies and low cost to the apple growers.

I have talked with the State insurance department of Iowa regarding this type of hail insurance. They indicate that they will look with favor on such a plan enlarged. We know that it is legal because it has already been done with a 10 per cent clause. Optional 25 and 35 per cent clauses should be added to the policies and rates graduated downward accordingly. There should be no guesswork about those rates but some careful figuring on past experience to arrive at as low cost to the apple growers as possible. I say again that it is the last chance to save a dying business and make a real one out of it.

The above information and ideas were presented to the fruit hail committee of some large hail insurance companies during the past winter and to some extent one year before. I have just been notified that this plan has been turned down, for the 1931 season anyway, and the companies are again offering the same high cost policy of last year, which few apple growers can afford enough of to give them real protection against the more rare heavy hail.

If readers of this article think that the ideas expressed here are suited to their needs, tell your insurance agents and write to hail insurance companies. Save this article for reference.—Robert M. Clark, Mitchellville, Iowa.

## **FRUIT AND VEGETABLE REVIEW [From Page 9]**

### **Many Tomatoes Available**

The important shipping season for tomatoes in central Mississippi and eastern Texas was well under way by the middle of June, after a considerable delay. Movement from those sections was expected to be very heavy. Five second-early States together expect 4,389,000 bushels of tomatoes, or 11% more than last season. Eastern Texas has a record-breaking crop of 2,400,000 bushels and Mississippi a good-sized crop of 1,428,000 bushels. Lug boxes were opening the season in these two States at 90¢-\$1.10 on an f.o.b. basis, with 4-basket crates in Mississippi returning 65¢. Track-holdings during mid-June were quite heavy, averaging 500 cars or more each day in 12 larger markets. City prices of tomatoes were rather low. Florida and the southern part of Texas were still shipping fairly large quantities, and light shipments were coming from South Carolina and from California.

### **"WHAT WILL AN APPLE ORCHARD COST ME?"**

IN THE ARTICLE under the above title, which appeared in the May issue of AMERICAN FRUIT GROWER, statement was made that the material was "gathered in co-operation with the Missouri College of Agriculture, from 18 major apple orchard growers in Missouri."

It develops that this work was carried on by Messrs. D. C. Wood, of the Missouri College of Agriculture, and H. W. Guengerich, Jackson county horticultural agent of Independence, Mo., and was published as Circular 225 of the Missouri College of Agriculture. The article proves to be a condensation and rearrangement of the material contained in this circular.

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## COMMON SENSE IN CONTROLLING CANKER [From Page 6]

becomes blackened and eventually falls off, exposing strips of dead wood. The stomata, or blisters, however, remain firmly attached by a ring of fungous tissue. At this stage, they have become somewhat irregular in outline, are about one-fourth to one-half inch in diameter, and are very hard and brittle. These stomata have been aptly described as "nail heads."

There are four features by which blister canker can be identified in its more advanced stages.

1. The mottled appearance of the diseased bark as the fungus advances into healthy tissue.

2. The presence of blisters and their star-shaped appearance upon bursting open.

3. Small black circles of fungous tissue, around a wood-colored center, are exposed by cutting into the diseased bark.

4. The presence of hardened stomata or "nail heads" on old cankers.

Blister canker is a wound parasite and does not ordinarily infect through the bark or in young living tissues. Large pruning wounds and frost cracks are the most dangerous avenues for infection, but many infections may be traced to wounds no larger than one inch in diameter. Mechanical injuries, rodent injury, and any accidental wounds form places for the disease to gain entrance.

Much can be done towards controlling blister canker by planting resistant varieties. Some varieties also possess the ability to heal wounds and injuries much quicker than others. Blister canker spreads much more slowly in a healthy, vigorous tree than in a weak, slow-growing tree. Of the more resistant sorts may be listed Oldenburg, Wealthy, Jonathan, Ralls, Arkansas, Arkansas Black, Fameuse, Stayman Winesap, Winesap and Golden Delicious. Of the more or less susceptible varieties are Ben Davis, Gano, Delicious, Grimes, Rome, Northern Spy, King David, Maiden Blush, Missouri Pippin and Northwestern Greening. The first three named are especially susceptible to the disease.

The selection of a north or northeast slope, if possible, for the orchard site will materially aid in keeping canker out of the orchard. Winter injury occurs less frequently on those slopes.

Pruning wounds form an important avenue of infection which can largely be eliminated with care. Proper pruning and training of the apple tree while it is young will mean the avoidance of large wounds later

in the life of the tree. The formation of a strong head and strong crotches in the early life of the tree will prevent splitting later when these wounds are excellent places for blister canker infection. Care to avoid too open a tree will prevent sunscald later on and possible infection through such wounds.

All wounds made in pruning should be disinfected and if over one inch in diameter, painted with a suitable cover to prevent drying out and render it impossible for the fungous spores to germinate in the wood tissues. Copper sulphate and corrosive sublimate have proved effective disinfectants. Liquid asphaltum and white lead paint seem to be among the best covers for pruning wounds. The disinfectant can be mixed with the paint and applied in the same operation. This is the most satisfactory method except where excessive bleeding takes place. In this case disinfection should be made at the time of pruning and the cover applied some days later after the wound has dried. If the paint covering the wound shows a tendency to blister, this can be overcome by first applying a thin coat, and later a heavier coat of paint. If white lead paint is used, it will be necessary to repaint the wound several times before it heals. Disinfectants should be used at the following rates.

2 oz. corrosive sublimate to 15 gal. water.

1 lb. copper sulphate to 10 gal. water.

1 oz. corrosive sublimate to 2 qts. paint.

1 oz. copper sulphate to 1 qt. paint.

All wounds of any kind should be avoided in the orchard. The trees should be protected from rodent injury and from barking by cultivating implements. The wearing of rubber soled shoes in pruning will help to prevent the barking of limbs. Accidental wounds should be cleaned out, slightly pointed above and below, and painted the same as pruning wounds.

Systems of proper soil management, spraying, pruning, or anything that will keep the trees in healthy, fruitful growth, will reduce the danger of loss from blister canker.

The practice of general sanitary measures will help greatly in preventing the spread of blister canker over the orchard. All diseased trees, branches, and parts removed in pruning are best removed from the orchard and burned. Diseased brush lying around the orchard will spout spores for some time and be a menace to the healthy trees.

## POISON BAIT FOR CUT WORMS

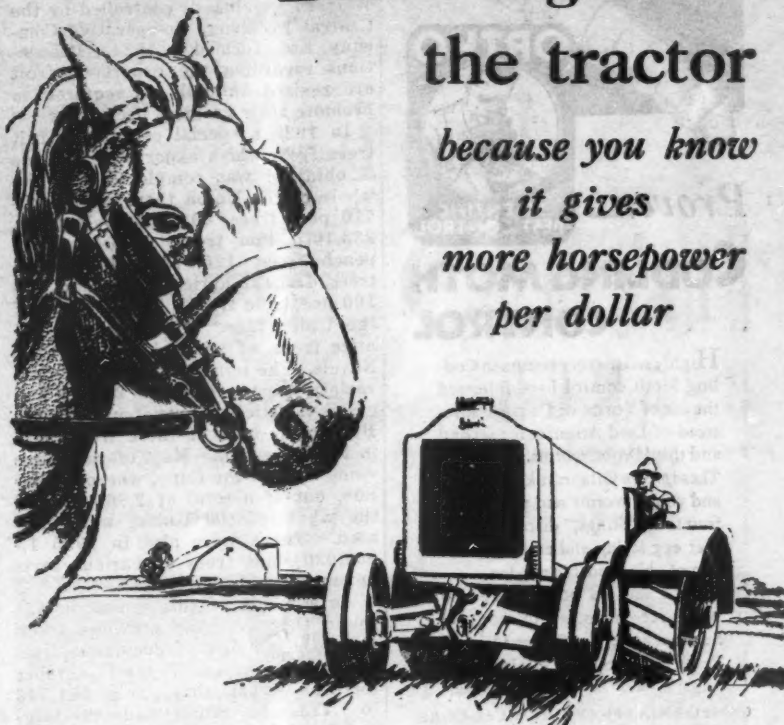
FOR QUICK RESULTS in combating cut worms, the New York Experiment Station recommends an inexpensive poison bait, either broadcast in the field, or, in the case of small fruits, sprinkled about the base of each plant. The following formula is said to provide enough material for two or three acres: Bran, 20 pounds; Paris green, one pound; cheap syrup, two quarts; three lemons; and about three and one-half gallons of water.

The bran and Paris green are mixed dry. The juice of the lemons is squeezed into the water and the

peel and pulp chopped to fine bits and added to the water. The syrup is then dissolved in the water and fruit mixture and the liquid stirred into the bran thoroughly in order to dampen the latter evenly.

If a smaller quantity is wanted, the amounts of the different ingredients should be reduced proportionately. Because cut worms are night-feeders, it is recommended that the poison bait be applied in the evening so that the bait will be in a fresher condition and thus more attractive to the cut worms than if applied earlier in the day.

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## FRUIT GROWING IN SOUTH AFRICA

[From Page 5]

rica. Export of fruit from the Western Province is controlled by the Central Deciduous Co-operative Company, Ltd., formed in 1924. Regulations regarding the export of fruit are revised annually as required to promote their greatest usefulness.

In 1925 a special census of fruit trees from which exportable produce is obtained was completed. In the whole of the Union there were 459,716 pear trees, 402,374 apple trees, 333,100 plum trees, 241,116 white peach trees, 120,973 yellow peach trees, 135,432 apricot trees, and 31,100 nectarine trees. In the whole of the Union there were 2,558,313 orange trees, of which 1,514,536 were Navels. The number of tight-skinned variety naartje trees was 39,791, and of all varieties of grapefruit, 52,325. By far the bulk of these trees were in the Transvaal. Most of the grape vines were in the Cape, where 2,863,808, out of a total of 2,865,538 for the whole of the Union, were situated. There were also in 1925 1,853,020 fruit trees of various sorts not mentioned above.

As a result of this census it was found that over the previous seven years the number of deciduous fruit trees had increased their number three and a half times, from 501,746 to 1,723,821. Plums made the largest individual advance, 199,953 new trees being planted during that period. The greatest comparative increase, however, was made by yellow peaches, this actually amounting to 507 per cent. It is difficult without official figures to give an accurate impression of what has been done since 1925, but the advance has been on a similar scale.

Apples have long been grown most extensively in the Transvaal, but of recent years large tracts of ground in the Cape have been devoted to this fruit, and it is expected that this part of South Africa will again take the lead in the production of apples. The Transvaal has made remarkable strides in fruit growing. Between 1918 and 1925 there was a 708 per cent increase in its apple tree plantings, a 1173 per cent increase in apricot plantings, and a 611 per cent increase in its pear plantings.

The rapid increase in South African deciduous fruit exports will be realized by quoting a few figures. In the 1925-26 season, 1,564,161 cases were exported; the following season the total rose to 1,523,526 cases, and for the 1927-28 season the record number of 1,920,175 cases. Most of this increase was due to the large amount of pears grown; in most of the other fruits there was even a decrease. The 1928 season was noteworthy, however, for the consistent quality of the exports and the satisfactory basis on which fruit transport was placed.

Pre-cooling chambers have now been constructed at Cape Town and Durban docks and special facilities are provided for rapid handling of fruit cargoes. At the present rate 20,000 cases can be loaded in 24 hours. The pre-cooling chambers are the most modern of their kind, well-equipped and fairly large. The chambers at Cape Town provide storage for 3828 shipping tons and those at Durban for 3000 shipping tons.

Citrus fruits have made steady progress in South Africa during the last few years, the 1929 season probably being the most unsatisfactory for a long time. In 1925 the citrus exports totalled 751,814 cases, and in 1926 they fell to 611,531 cases.

In 1927, however, there was a brisk rise to 838,703 cases, of which 748,444 were oranges.

It has been felt for a long time that the marketing of South African oranges is hampered by lack of a suitable district mark, and the growers in the Kat River Valley, Cape, are combining with the idea of reducing the number of South African brands, which are much too numerous at present. A national brand is impossible for the whole of South Africa. Nothing like the well-known Californian "Sunkist" mark will be achieved. Different South African localities grow fruit varying so much in quality that the only possible ideal is to associate brands with districts. Reputations thus won are expected to obtain better prices for growers.

Commercial fruits in South Africa are propagated in various ways, but for pears particularly seedlings are imported from Europe. Suckers are occasionally employed, but this method rarely gives success. Stocks for apples are often provided by varieties like the sweet apple. On account of the attacks of woolly aphis, rootstocks of the Northern Spy variety are generally chosen. Although immune from this parasite, Northern Spy has a very shallow rootstock and tends to dwarf trees. The woolly aphis is not able to flourish so well in the Cape, where free growing stocks are preferred to the Northern Spy. In the northern apple districts the parasite *Aphelinus mali* has been used successfully to fight the woolly aphis.

Young seedling peach trees are often used as stocks for many varieties of stone fruit. The "Varkneus," or Transvaal yellow peach, is regarded in South Africa as excellent for this purpose. As the South African grower's principal market is in England, he is paying more attention to growing white fleshed peaches. Yellow flesh varieties sell well within the Union, but their sale in England is disappointingly small.

In the laying out of South African orchards, practically no attention has been paid to pollination, which has been made the subject of scientific investigation by the Department of Pomology of the Stellenbosch-Elsenburg College of Agriculture. The result of these investigations has not been published, but it has been laid down as a general rule that large blocks of self-sterile varieties should not be planted. Growers are advised to have bees in their orchards.

Climatic conditions naturally have a decided effect on South African fruit growing. The poor 1927 crop of apricots was due to winter dessication in the eastern part of the Cape, available supplies of water being so small that growers decided not to irrigate until the following spring. Hailstorms occur in many parts of South Africa, where citrus crops have been ruined. Hail rarely falls along the Cape coast, and it is claimed that certain fruit-growing regions in the Transvaal are outside the hail belt. There are, however, no well defined belts of this type. In spite of the damage done by hail, the production of fruit has steadily increased.

Irrigation is essential in South African fruit growing. In spite of rains all the year around on the south coast, these are often so irregular that irrigation is imperative if satisfactory crops are to be obtained. It is a surprising fact that young stone fruit trees on peach stocks will de-

velop vigorously in certain Karoo soils without irrigation. This is a notoriously dry region usually devoted to sheep farming. In the third and fourth years these trees will bear large crops, many continuing to yield well for several years.

Various methods of irrigation and conservation are employed by South African growers, but as they are in many ways similar to those employed in California, it is hardly necessary to enumerate them here. It might be mentioned that in many respects the South African climate is similar to the Californian, the main difference being South Africa's wider range. South Africa is at a disadvantage in having no mountain ranges with snow peaks to supply irrigation water. California consists of mountains and valleys; South Africa of plateaus.

South African soils have been studied closely in relation to fruit growing. It has been found, for instance, that the calcareous soils are only suitable for olives, grapes and figs. In the apparently solid limestone of the Barkly West district, wild olives grow to a considerable age. Soils ranging from stony sands to heavy clays have been found suitable for such fruits as guavas, figs, persimmons, passion fruit, pomegranates and loquats. Well drained soils are necessary for the pineapple and the pawpaw, but the date, litchi and persimmon are sometimes grown in comparatively water-logged soils. In general South African practice is similar to that in other parts of the world, fruits being adapted to the loams and clays and other soils for which they are best suited.

Many varieties of apple have been listed as suitable for commercial production, but South African growers have only had really good results from the York Imperial, Jonathan and Northern Spy, which have been selected from the large range of varieties tried. Unfortunately many South African growers have what might be called variety orchards. There are apple orchards containing over 50 varieties, and peach orchards with as many as 100 varieties. Citrus orchards with more than a score of varieties are also found. Although excellent data have been obtained in this way, fruit growing on these terms has not proved remunerative. Growers are realizing the value of planting only the best varieties. The most successful are those who have concentrated on but one or two varieties.

The choice of sites for profitable production of definite sorts of fruit has long been neglected, but a horticultural survey of the Union is now being completed, and the information yielded will show which parts favor certain sorts and varieties of fruit.

### ARGENTINA REMOVES BAN ON APPLE PACKAGES

AMERICAN apples and pears may be imported (into Argentina) in barrels or bushel baskets, as a result of negotiations of the United States Embassy," according to a press dispatch from Buenos Aires. "The Provisional Government had previously decreed that such fruit must be shipped to Argentina in boxes. Fruit shipped in barrels or baskets must conform to all other sanitary restrictions of the Argentine Bureau of Agricultural Defense."

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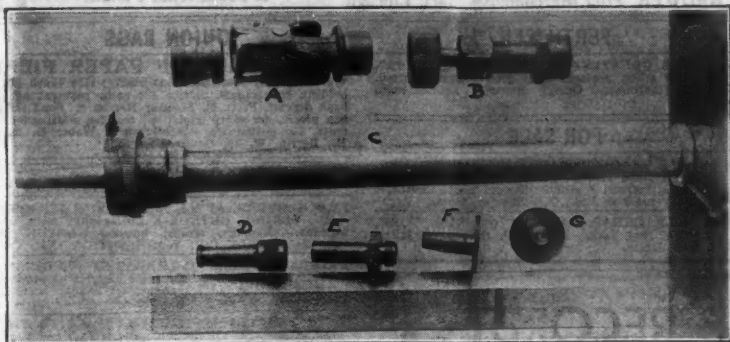


## A NEW "TIP" FOR HIGH SPRAYING

By C. L. BURKHOLDER

IT IS ALWAYS difficult to do a thorough job of spraying in the top of a large apple tree. This problem early led to the use of spraying towers constructed on the top of the spray tank. In most commercial sections where portable rigs are used towers are still commonly used. How-

the tree away from the wind. On days when there is a considerable wind, it is very difficult to give a proper spray coverage to the top third of the tree on the side away from the wind unless the material can be driven into the wind for considerable distances.



A.—An easily detached hose coupling. B.—A coupling which automatically keeps the kinks out of the hose. C.—A spray gun equipped with shade tree nozzle to reach tops of high trees. The disk should not be removed from the eddy chamber for best results. D., E., F., and G.—Different types of shade tree tips for rods and guns.

ever, even by using towers it is a difficult matter to thoroughly spray the top of a large tree against the wind. Of course, most growers cover their acreage with the wind and hope for a shift of wind to cover the opposite side. Unfortunately the change of wind often doesn't occur and disease and insect pests will not wait. That means "fighting the wind" and finishing up the job.

In recent years a number of improvements have been made in shade tree spraying equipment. Among these new accessories is what is known as a shade tree tip now being manufactured by several spray machinery concerns. The 8/64 or 9/64 sizes are as large as can be used on the average three-cylinder pump, especially if a second rod or smaller capacity gun is used with it. These tips are used in place of the flat disk in the gun without the removal of the whirl chamber disk, and can be quickly inserted for use on a block of higher trees. The regular close adjustment on the gun can be used to spread the spray and cover the foliage which is near to the operator, thus giving a good close-up as well as an excellent long-distance spray.

Outside of the dormant application, most growers prefer to finish each tree as they go. Here again the long-distance tip with the close-up adjustment of an ordinary gun makes an excellent spray tool. This is especially true in completing the side of

In the last few years stationary spray plants, similar to those of the Pacific Northwest, have been installed in many orchards in the central and eastern United States. This means that all spraying must be done from the ground. In the case of mature trees, the difficulty of reaching and thoroughly covering the top of the tree has greatly increased. Here in Indiana the stationary plant at one of the Purdue Agricultural Experiment Station orchards has been equipped with regular guns and 8/64-inch shade-tree tips for use on the blocks of tallest trees and on windy days. The result is a fine driving spray that can be put in the very tops of old trees and with a partial twist of the gun handle the spray cone can be spread out and shortened and the lower half of the trees as thoroughly covered as with a regular spray gun.

Another new accessory which came on the market in 1930 is the hose swivel. It attaches on the outer end of the spray hose at the base of the gun or rod. It prevents kinking of the hose and allows a much freer action of the gun. When a gun or rod is moved rapidly from one angle to another, without the swivel, there is always considerable resistance set up in the hose even when it is not in a twist to begin with. Anything which gives the operator more freedom of movement and at the same time reduces physical strain makes for a better, more efficient job of spraying.

## AMERICAN FRUIT GROWER "WONDER TOUR" [From Page 7]

magic, palm-shaded Los Angeles. And during our three days there, we shall see Hollywood, capital of Film-land, the gay beaches, Riverside and the orange groves, more old Missions, and make a short ocean voyage to Santa Catalina Island. Of course, these are but the high spots of our story.

Our next stop is at Brawley, Calif., in the heart of noted Imperial Valley, with its all-year crops of cantaloupes, lettuce, peas, strawberries, asparagus—and its modern packing plants.

And for the finale—a visit to the old frontier city, El Paso, Texas. After sightseeing there, we'll whiz

across the Rio Grande to Juarez, in a foreign land—Old Mexico. Our explorations there will include cafes with Mexican food and music, strange shops, historic places and the huge Plaza del Toros, or Bull Ring.

This is a tour to be remembered all the rest of your life. Nothing has been overlooked that could add to the fun and thrills that fill every day of the itinerary. Three great railroads have joined with AMERICAN FRUIT GROWER to make it an outstanding success. And the cost is surprisingly low.

It isn't too late to join our jolly, congenial party. Write today for complete information.



## A real "Thrift Cereal"

... out of one package costing only a few cents you get many breakfasts, lunches, children's suppers, bedtime snacks



ALL OVER the country, Kellogg's Corn Flakes save housewives time, work and money. Crunchy-crisp flakes of toasted corn—ready to serve from the package. Many tempting, economical ways to enjoy!

Kellogg's Corn Flakes encourage the use of surplus home-raised products. Delicious with berries, peaches, milk, cream, honey. Extra healthful too. So easy to digest. Ideal for children.

More than 12,000,000 people daily prefer the wonder flavor of Kellogg's, which imitations never equal. Get the red-and-green package at your grocer's. Always oven-fresh in the patented inner-seal waxtite wrapper. Made by Kellogg in Battle Creek.

The world's most popular ready-to-eat cereal—and a real farm product. It takes a whole year's bumper crop from 700 acres of corn to supply just one day's demand for Kellogg's. About 2,500,000 quarts of milk and cream are used daily. And tons of orchard fruits.





# AMERICAN FRUIT GROWER

## OPPORTUNITY ADS

250,000 Buyers and Sellers Meet Here Monthly For Mutual Profit

### A PROFITABLE HABIT

Read these ads each month. Answer those that interest you. It's a profitable habit. You may do business with our advertisers with full confidence of a square deal. Use an ad yourself wherever you have something to sell or want to buy something. Send your ad now; it costs only 20 cents a word. Be sure to count name and address. Each initial or whole number is a word. Our regular advertisers say it pays handsomely.



Harry K. Goodall, C. A. M., AMERICAN FRUIT GROWER, 1105 Merchandise Mart, Chicago



### AGENTS WANTED

IF YOU WANT A WONDERFUL OPPORTUNITY to make \$15 profit a day, and get your groceries and household supplies at wholesale, send me your name immediately. No experience necessary. New Ford Sedan free to producers. ALBERT MILLS, 9000 MONMOUTH, CINCINNATI, O.

### ATTENTION-ADVERTISERS

LET US HELP YOU WITH YOUR CLASSIFIED Advertising problem. Tell us what you want to accomplish and let us write a snappy classified ad for you without charge. If it suits you, run it in AMERICAN FRUIT GROWER at the regular rate. No obligation, no write fully today to Harry K. Goodall, Classified Advertising Manager, AMERICAN FRUIT GROWER, Merchandise Mart, Chicago.

### BEEES

PURELY BRED GOLDEN ITALIAN QUEENS, yellow to the tip. Satisfaction guaranteed. One dollar each. Overberg Apiaries, Leonville, La.

BEE KEEPERS-ATTENTION. "YOUR MAGAZINE" has opened a new field for our products," writes Citronelle Bee Co. "The results were beyond our expectations. It was the first time we ever advertised in other than Bee Journals." Mr. Bee Man, you should use a classified ad in our next issue. Send it in today.

THREE BAND ITALIAN BEES. 2 LB. PACKAGES, \$2; 3 lb. packages, \$2.50 each. Young Mated Queens, 35 cents each. Any Amount. D. C. Jackson, Puntoon, Ga.

### BOOKS FOR FRUIT GROWERS

THERE IS A BOOK FOR YOU ON ANY PHASE OF the fruit growing industry. We have them all. Send for a complete list or order one or more of the following direct from this ad:

"Merchandising Fruits and Vegetables" by Sherman, 400 pages, 26 chapters, \$4.00 postpaid.  
"Manual of Fruit Diseases" by Heister and Wheeler, 463 pages, 125 illustrations, \$3.50 postpaid.  
"Fundamentals of Fruit Production" by Gardner, 685 pages, 70 illustrations, \$4.50 postpaid.  
"Principles of Fruit Growing" by Bailey, 432 pages, 186 illustrations, \$2.50 postpaid.  
Save 5% by ordering 2 or more books at once. Tell your friends. Write today. AMERICAN FRUIT GROWER, Book Department 6C, Merchandise Mart, Chicago.

### CHAIR BOTTOMS

WHITE OAK, 1/2-inch SPLINTS, 1,000 FEET \$1.50. David Hardin, Pateville, Ky.

### DOGS

COON, OPOSSUM, MINK, FOX, AND RABBIT hounds cheap, shipped for trial. Free literature showing pictures and breeding. Kentucky Coonhound Kennel, Kevil, Kentucky.

THE ABOVE ADVERTISER WRITES: "OUR RESULTS have been eminently satisfactory and have far exceeded our expectations. We believe anyone advertising in AMERICAN FRUIT GROWER will be entirely satisfied with the results obtained."—(Signed) R. H. Brummett, Manager.

HUNDRED HOUNDS, HALF PRICE SUPPLY Catalog. Beckenfels, SR51, Herrick, Illinois.

### FARMS AND ORCHARDS

OSARK ORCHARD, 160 ACRES, WITH IMPROVEMENTS, in Oregon County, Missouri, the heart of the famous Ozark fruit region. Railroad and federal highway. 5,000 Starke Bros. trees—six to eight years old, handled from the beginning by an experienced orchardist. Fully developed and equipped. In pink of condition. Should yield years of profit and enjoyment to anyone interested in fruit-growing. Offered at low price and reasonable terms. For details write Pioneer Trust Company, Kansas City, Missouri.

ORCHARD—3000 APPLE TREES, 160 ACRES. Good buildings. Timber. Box 553, Windber, Pa.

### EXCHANGE DEPARTMENT

YOU HAVE SOMETHING YOU NO LONGER NEED. Some other reader needs it and has something you do need. Tell our readers about it here in the next issue and make an advantageous trade at small cost. Use the convenient order blank at the bottom of this page.

### FARMS WANTED

WANTED—FARMS OR BUSINESS EVERYWHERE. Cash buyers. National Brokers, 3513 Lakewood, Detroit, Mich.

WANTED TO HEAR FROM OWNER HAVING farm or unimproved land for sale. Give cash price. John Black, Chippewa Falls, Wisconsin.

### FERTILIZER

NATURE'S GREATEST FERTILIZER. CANADIAN hardwood ashes, replaces what growth has extracted. Orchards, meadows. George Stevens, Peterborough, Ontario.

### FOR SALE

10-20 CASE TRACTOR, BARGAIN. SAW FRAMES. 10-20 Cleveland Tractor. Get our half price offer on gasoline engines, oil engines. Several small threshers, cheap. Dissinger & Bro., Wrightsville, Penna.

FOR SALE CHEAP—APPLES OF NEW YORK. Grapes of New York. Address P. O. Box 68, Hillsdale, New Jersey.

### ONION BAGS

#### ONION BAGS OF PAPER FIBRE

We can supply 2,000,000 bags yearly; size 41x30 inches holding 100 pounds. Price 12c each, payment against bank deposit, F. O. B. Steamer Hamburg. Send sample bag please, for exact quotation; cost for mailing 8 to 10 cents, see postmaster. Wohleben & Weber G. m. b. H., Berlin, W. 30, Deutschland 13.

### ORCHARD SUPPLIES

PEACH SIZERS, APPLE SIZERS, SUMMER SPRAY oil, VERDOL, ORTHOL-K kills codling moth, saws washing. Ladders, wraps, boxes. DUTTON ORCHARD SUPPLY CO., WASHINGTON, IND.

FRUIT LADDERS—CELEBRATED LUDINGTON Fruit Ladders. Send for price circular on most satisfactory picking ladders on market today. Ludington Fruit Exchange, Ludington, Mich.

TREE BRACING MATERIALS. SEALTITE TREE-wound Dressing G. Vanized Screw Hooks and Bracing Rods. Circular. Rollin H. Tabor, Mount Vernon, Ohio.

BALLOU ROTARY APPLE SIZER COST \$180.00, used one season only. Sold orchard. Price \$60.00. Crated. C. A. Dutton, Galesville, Wisc.

### PRINTING OF ALL KINDS

STATIONERY CABINETS, 200 NOTE SHEETS 6x9 and 100 envelopes, good white bond, neatly printed with your name and address, sent postpaid for \$1.00. Carl Edquist, Odessa, Minn.

### A PRACTICAL DEMONSTRATION

If this were your ad, others would be reading it now just as you are reading this. This demonstrates the attention-getting value of a "display-classified" ad in AMERICAN FRUIT GROWER.

This space is 2 inches and the cost is only \$39.20 or at the rate of \$19.60 an inch. For this small sum, YOU can place your sales message prominently before over a quarter of a million live readers who read what you have to sell.

Send in your copy for a "display-classified" ad for the July issue NOW. Smallest accepted in this style is 1/2 inch costing but \$9.80—a very small amount for reaching so many real prospective customers. Address:

HARRY K. GOODALL

AMERICAN FRUIT GROWER

Merchandise Mart, Chicago

### Index to Display Advertisements

The concerns whose advertisements appear listed below are equipped to give prompt and satisfactory service to the American fruit grower. Most of them issue literature that is freely at the disposal of our subscribers. It is to the advantage of all that when writing to an advertiser you use the address exactly as it appears in the advertisement, and that you state in your letter: "I read Your Advertisement in AMERICAN FRUIT GROWER MAGAZINE."

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### FRUIT GROWERS' SUPPLIES

CRATES FOR FRUITS, VEGETABLES, LUMBER in car lots wholesale prices direct from mill to consumer. McKee-Fleming Lbr. Co., Emporia, Kans.

### FUR RABBITS

MAKE EXTRA MONEY RAISING "SELECTED King" White New Zealand, Chinchilla, and Silver Marten Fur Rabbits. Send for large illustrated Brochure, Fur News, and our low wholesale prices. Conrad's Fur Ranch, 846 Englewood, Denver, Colorado.

GENUINE GERMAN FITCH: CHINCHILLA AND Rex Rabbits. Stump Silver Fox Farm, Menasha, Wisc.

### GUMMED LABELS

GET OUR PRICES ON LABELS: GUMMED AND ungummed. Send sample of your label for prices, circulars, additips, folders, letterheads, envelopes, blotters. Plain or in colors. Write us. Old Dominion Label Company, Bridgewater, Virginia.

### INSTRUCTION

WANTED, ELIGIBLE MEN, WOMEN, BOYS, Girls, 18-50. Qualify for Government Positions. Salary range, \$105-\$250 monthly; Steady Employment; Paid vacations; Common education. Thousands appointed yearly. Write, Instruction Bureau, 250, St. Louis, Mo. Quickly.

MEN 18-35. STEADY. \$158.00-\$225.00 MONTH. RAILWAY POSTAL CLERKS. Common education sufficient. Experience unnecessary. 25 reached free. Write today. Franklin Institute, Dept. 160, Rochester, N. Y.

### OF INTEREST TO WOMEN

MAKE \$6.00 DOZEN SEWING BROADCLOTH TEA aprons. Cut aprons furnished. No selling. Prompt pay. Send 35c (coin) for instructions. KOWALSKI COMPANY, BRENNHAM, TEXAS.

QUILT PIECES—PAST COLORS, PRINT, PERcales. Trial package—25c postpaid. Grant's Supply Store, Warsaw, Illinois.

### OLD GOLD WANTED

CASH FOR GOLD TEETH. HIGHEST PRICES. Information free. Southwest Gold & Silver Co., Box 68V, Fort Worth, Texas.

## A REMARKABLE RECORD » » »

### Ten Years Without Missing A Single Issue

One of the advertisers on this page has used a classified ad in every issue for ten years—120 consecutive monthly magazines. That's some record. He has spent about \$800 for his small classified ad during this time. Even if we didn't have his word for it, the very fact itself would prove that it paid him. Read this quotation from a recent letter.

We are very well pleased with the response we have had to the advertisements for ZANOL representatives that we have been running in the classified columns of AMERICAN FRUIT GROWER continuously for the past ten years.

Not only did our advertising produce a satisfactory number of replies, but the caliber of the inquiries was above the average and we have secured high class Representatives in various localities where formerly we had no representation.

Since AMERICAN FRUIT GROWER has put us in touch with this desirable class of sales people, it has proved itself a valuable advertising medium, and you may depend on us to use your classified section in future for the purpose of recruiting our sales organization. (Signed) R. L. Lippert, Advertising Manager, American Products Company, Cincinnati, Ohio. Note: This ad in this issue is signed, "Albert Mills, 9000 Monmouth, Cincinnati, Ohio."

Mr. Classified Advertiser, this true story of classified advertising success should cause you to stop and think—then ACT. You too can profit by following the example of this well-known advertiser and careful buyer of classified advertising space. A word to the wise. Address:

Harry K. Goodall, Classified Advertising Manager  
AMERICAN FRUIT GROWER  
Merchandise Mart, Chicago.

MR. BLACK SAYS: "WE USE NEARLY ALL leading publications in the U. S. and Canada, when they do not bring results they are soon discontinued. You can rest assured that AMERICAN FRUIT GROWER will be one that will be retained by us."—(Signed) John J. Black, Gen'l. Mgr.

### FEMALE HELP WANTED

WOMEN, GIRLS, WHO WANT TO MAKE \$4 EXTRA money daily at home; light work; send 25c for instruction and sample used; money refunded on return of sample. La-Monge Co., Dept. E, 75 Locust, Rochester, N. Y.

## What Have YOU To Sell?

Not your main crop of fruits—this is not the place to sell that—but it is the place to sell many things you own that perhaps you no longer need or use. Many of our quarter of a million subscribers do need and want these very things and will pay you cash for them. You can use the cash. Why not get it?

Look over this alphabetical list of things you may own that you would like to turn into cash—

Bees  
Brooders  
Canning Machines  
Cream Separators  
Fencing  
Fertilizers  
Fruit Packages  
Gasoline Engines  
Honey  
Incubators  
Insecticides  
Lumber  
Nursery Stock  
Orchard Lands  
Poultry and Eggs  
Pruning Tools  
Real Estate  
Seeds  
Sprayers  
Stump Pullers  
Tractors

An easy, inexpensive way to sell any of the above items is to use a classified ad in this live department of AMERICAN FRUIT GROWER in the very next issue. The cost is low—only 20 cents a word. Write your message for our readers now. Use separate sheet. Clip this announcement, attach ad copy, sign and mail with proper remittance at once.

Name .....

Address .....

Send this before July 20th for August issue to: Mr. Goodall, C. A. M., AMERICAN FRUIT GROWER, 1105 Merchandise Mart, CHICAGO, Illinois



# THE CONDITION OF FRUITS

(From Page 11)

hold true in 1931, about 426,000 tons of number one fruit may be produced if crop conditions remain normal until harvest. The revised total production for 1930 was 542,000 tons, of which 95,000 tons are estimated as rejects and number two unharvested fruit. In addition to this, 148,390 tons of number one fruit was purchased by the Control Committee and dropped, the harvested crop being 293,700 tons.

Freestone peaches on a report of 83 support a forecast of 213,000 tons as compared with 254,000 tons total crop produced last year. Of the 1930 crop, 242,000 tons were harvested and 12,000 tons left unharvested. Both drying and shipping types show good prospects of production.

**PEARS:** June 1 condition of pears is reported to be 61.4 per cent or somewhat lower than a year ago and below the average for June 1 the preceding 10 years. For the present, indications are for a production of 23-572,000 bushels this year compared with 27,577,000 last year and 22,123,000, the average crop of the preceding five years. Conditions are comparatively low in all sections of the country except the southeast. The present prospect is much better than last year in the central and southern States, but is appreciably lower than on June 1 a year ago in the important eastern and western States. The crop in the Pacific Northwest was damaged by freezes and high winds and has suffered from lack of water.

**NEW ENGLAND:** Pears are expected to be rather a light crop.

**NEW YORK:** All comments and figures indicate a light pear crop, with Bartletts very light, Seckles light, and Keiffers moderately good. The condition of 49 is the lowest in our records going back to 1909.

**NEW JERSEY:** A rather poor pear crop is in prospect. The condition as reported on June 1, with the exception of the poor crop of last year, is the lowest that has been reported since 1922. This is partly due to frost damage, and poor set caused by unfavorable weather conditions.

**PENNSYLVANIA:** Pears were injured by late frosts. Some hail damage during the latter part of May was reported in the southeastern part of the State.

**OHIO:** Pears suffered most from the cool spell during the last week in May. Most of the trees were in blossom at this time resulting in poor pollination and a heavy drop of those that did set well.

**ILLINOIS:** Above average and the majority of commercial orchards report a good prospect. Trees are clean, quality prospect good and insect infestation is less prevalent than usual. Our rather spotted condition according to reports is in the northern half of the pear belt. The more southern counties have a good crop.

**MICHIGAN:** Commercial growers in southwestern Michigan are pessimistic because of the light bloom. Berrien county reporting 41 per cent, Allegan county 52 per cent, and Van Buren county 50 per cent. Some frost damage reported, but this has apparently been light and confined to only a few scattered areas.

**MISSOURI:** Pears in the northern counties suffered severely from frost and cold weather at blooming time.

**NEBRASKA:** Pears were injured by frost and freezing temperatures.

**KANSAS:** The prospects are for a fairly good pear crop. From present indications the crop should turn out larger than that harvested last year but smaller than the 1929 crop.

**DELAWARE:** Pears apparently did not bloom as well as the other fruits, but they suffered less from frost damage than did peaches, and a crop considerably larger than average of recent years is expected.

**MARYLAND:** Prospects are yet uncertain for pears. The bloom is fairly heavy but was thinned by frost. It is yet too early to determine how well the crop will set.

**WEST VIRGINIA:** The pear crop of the state is in fine condition and comments are to the effect that the production, barring any damage, will be heavy.

**TENNESSEE:** As with other fruits, pears are reported in excellent condition, the highest shown by our records, which extend through 1915.

**MISSISSIPPI:** Pear prospects, although more favorable than in recent years, have suffered some loss from shedding.

**LOUISIANA:** Most of the pears grown in this state are canning pears and are not fit to eat out-of-hand. When canned, however, they are excellent and delicious. Pears are grown mostly scattering in this state although there are a few small orchards in certain sections.

**OKLAHOMA:** Pears seem to be injured more severely than other fruits. Practically no pears are left in the western third of the state and the north-central area. The crop in the central section is indicated to be about 11 per cent. About one-fourth of the crop is left in the eastern third of the state.

**TEXAS:** Pear conditions are almost identical with peach conditions. In northern and central districts the crop is a near failure. In the rest of the state, prospects are good.

**IDAHO:** Comments from all sources indicate a good average crop.

**COLORADO:** Pears wintered well but were damaged by hail storms late in April, and early in May in the Clifton district. The Bartlett pear was more seriously injured

than the Keiffers and other late varieties. There has been no freeze damage to pears in Mesa county, although the prospects in Delta county have been reduced at least 50%. A slight drop in condition can be expected as the season progresses. There has been no expansion in the acreage of pear trees of bearing age in recent years. A slight reduction in Mesa county has been offset by some increase in Delta county.

**NEW MEXICO:** Apples and pears have been damaged somewhat by the March weather, but it is thought there will be a crop as good as last year. Fruit orchards are on a decline in the Pecos, many orchards being reported to have been pulled out. Pear orchards in the Mesilla Valley are reduced because of the blight.

**UTAH:** Condition similar to peaches.

**WASHINGTON:** Pears were damaged by late freezes in Yakima Valley and by high winds and dust storms during pollination period. It is believed that all varieties, excepting Winter Nellis, will be short this year. Pears are still dropping. This applies also to the White Salmon district, excepting in higher elevations where the bloom was not far enough advanced. In the opinion of fruit correspondents in Yakima district, where most of the pears grow, this district will have slightly less than one-half a crop this season. But later on the prospects may look better.

**OREGON:** Drought is the chief contributing factor in the present low condition of pears in the principal pear producing area in the Rogue River Valley, although frost and winds have exacted their toll. Considerable blight in some localities. Lack of irrigation water is big problem this season. Willamette Valley: Bartletts and D'Anjou a good half crop 55%. A very poor set generally, with only 10% in some localities. Some trees have no fruit. Hood River Valley: Winter Nellis good at 80% in some localities. Bloomed well generally but set poorly. Some knocked out by dust storm and late frost. Anjoua bloomed heavily but dropped. Some blame dust as they were in full bloom at that time. Bosc bloomed later and set heavily. Bartletts set well. In other localities Bosc 75%, Bartletts 25%, Anjoua 25%. Anjoua are still dropping. Other reporters cannot account for failure of pears to set as perfect pollination conditions existed during blooming period. Umatilla County: Pears show about a normal crop. Rogue River Valley: Are light in some localities due to light bloom, frost and poor pollination. Last week's frost ruined some prospects. In other localities Bosc are 100% with Anjoua 75% or less. Bartletts show a very light crop, not more than 50%. A very heavy drop but the fruit remaining is high in quality with no frost or hail damage. In one locality near Medford, Bartletts are estimated at 40% of last year. Anjoua 60%, Nellis 90%, Comice 70% and Bosc about 85% at this time but in most sections blight is bad with some orchards keeping one man busy per acre cutting blight. In another locality near Medford, Howells are 75% of normal with Bartletts 60-85%, Anjoua 60%, Comice 60% and Nellis 80%, illustrating variability. About 2 1/2 inches of irrigation water in storage now or less than one-half a normal irrigation. Generally Bartletts and Bosc bloomed light but Anjoua were good. All pears are sizing well.

**CALIFORNIA:** Pears have suffered only normal blight injury this season in most areas, although an undeterminable residual effect from 1930 epidemic will influence the size of this crop. The present indications are for a reasonably good crop of Bartletts as well as fall and winter varieties.

## GRAPES, CHERRIES, CITRUS, ETC.

**NEW YORK:** While too early for anything like forecasts since the crop will not bloom until late June, the grape crop is entering the season in unusually good condition in the Chautauqua belt and Niagara county, though only fair in the lower Hudson Valley.

|   | 1931 | 1930 |
|---|------|------|
| Per cent of fruit buds killed by freezing | 6    | 3    |
| Condition of crop                         | 90   | 85   |

**PENNSYLVANIA:** Grapes not set—too early—and clusters are not very numerous.

**OHIO:** Too early to tell whether or not there was frost damage to grapes.

**MICHIGAN:** The outlook is poor in commercial areas due to frost damage during late April and again the third week in May. Berrien county reports 61 per cent and Van Buren 64 per cent. Cut worms are reported to be working in some vineyards.

**MISSOURI:** Grapes were damaged by frost but have sent out another blossom spur so that we do not hear much complaint of the probable loss to grape production.

**CALIFORNIA:** Grapes are at present showing abundant crops of wine, raisin and table types with the condition of the wine grapes exceeding other types. Grape leaf hoppers are present in greater numbers over wider area than other years. Should later broods of these insects be as extensive as now feared, considerable loss may result both in tonnage and quality.

**CHERRIES:** The June 1 condition in 10 States for which total production is annually estimated is reported at 67 per cent of normal, compared with 59 per cent on June 1 last year and 63 per cent the year before. In the principal eastern and central States, the crop appears to have more favorable chances than a year ago, with the exception of sour cherries in New York which are lower

(To Next Page)



## One telephone call saved 100 acres of tomatoes

A LARGE tomato field belonging to a farmer of Scotland County, N. C., was suddenly attacked by hordes of horn worms. The whole crop would have been destroyed in a short time. The farmer immediately telephoned the office of a farm paper in a nearby city to ask about the proper spray. He was told what to use and how to mix it. Within a few hours preparations were made, spraying was begun, and the crop was saved.

The telephone is constantly proving its worth in helping to get the best prices for livestock, grain and fruit sold through co-operative associations or local markets. It is also of great service in making social and business engagements, running errands or summoning help in emergencies.

The modern farm home has a telephone that serves well, day in and day out, rain or shine.

A BELL SYSTEM



ADVERTISEMENT

## Will You Need Assistance in Marketing Your Fruit Crop?

To readers of the American Fruit Grower who are in need of a market outlet for fruit crops we offer assistance in placing them in touch with responsible shippers who will give them the best service possible.

In past years we have been able, where requested, to make profitable contacts for many of our readers. Realizing that the promise of an abundant fruit crop for 1931 will bring serious marketing problems to many of our readers, we offer to extend this service to them without cost.

If you have been dealing with a shipper or shipping organization in the past and have received reasonably good service, we strongly recommend against making any change during the present season. But if you are in a position where you are certain you will need the services of a dependable market outlet

write us a letter--

giving the number of trees in your orchard, the kinds and varieties of fruits, a statement as to the care and spraying they have received, and address it to

AMERICAN FRUIT GROWER Merchandise Mart Chicago



in condition than last year, due largely to frosts in early May. The crop in the western States, except California, indicates a generally less promising outlook than in either of the past two years, chiefly due to frost and wind damage and in some areas, poor pollination.

**NEW YORK:** The cold weather, with frosts in early May apparently damaged the sour cherries in western New York, which are centralized in Wayne county. It seems probable that the crop will be light.

**PENNSYLVANIA:** Cherries were also injured by late frosts. In general, sour varieties will be a good crop and sweets light.

**OHIO:** There was some injury to cherries (especially sweet) by cold freezing weather at blossom time. Quite a heavy drop reported in some sections.

**ILLINOIS:** Similar to other crops, cherries show a very favorable set and should produce a large crop this season.

**MICHIGAN:** Prospects are lightest in the southwestern counties where the April freeze damage was apparently greatest. The Oceana and Grand Traverse sections report a good outlook at present and, although the frosts of May 23-24 may have caused some damage in a few orchards, the thinning that resulted is believed to have been generally beneficial.

**WISCONSIN:** Condition is substantially higher than a year ago. Crop this year will probably be much larger than last.

**MISSOURI:** Cherries are beginning to turn and are fair crop in middle and northern sections, but poor in some of the southwest and cut by frost in the northern sections. Cherries met frost damage in the southern counties with around same result as for pears in the north, middle and northern counties having a fair crop of cherries. Most of commercial production of cherries is around Kansas City and St. Louis and in the southwest.

**NEBRASKA:** The cherry crop was reduced by frost. The late varieties seem to be the best, although some of the early varieties have a fair set of fruit. An estimate of 50% of a total crop is conservative.

**WEST VIRGINIA:** Sour cherries are reported to be in much better condition than sweet cherries. In one or two instances the sweet cherry crop was reported a complete failure due to frost.

**MONTANA:** Production outside of the northwestern district is almost negligible. Condition of cherries in this district slightly better than a year ago.

**IDAHO:** Large acreage of new plantings in recent years. Surprisingly low condition reported considering that the late spring frosts were believed not to have caused serious damage. Production was very good in 1930 and with more severe late spring frosts this year, it is quite likely that production this year will be under 1930.

**COLORADO:** Cherries were severely injured by early May freezes on the western slope and by low temperatures May 21 and 22 in northern Colorado. The Early Richmond variety was particularly affected although considerable damage has been done to Morrells and Montmorencys.

**UTAH:** In addition to some frost damage a considerable fraction of the cherries were injured by some cause or other very early in the season, so that a light bloom resulted. This applies especially to the dark sweet varieties, such as the Bings and Lamberts. These varieties constitute, approximately, 44 per cent of the total bearing cherry trees of the state. To offset this low condition is an increase in the number of bearing trees, amounting possibly to five or 10 per cent or even more of last year's total. Commercial plantings of cherry trees have been made each year for the past five or more years and at present the number of trees not yet old enough to bear is estimated as equal to the number of trees of bearing age.

**WASHINGTON:** A light crop due to frost damage and poor pollination. Weather was bad during pollination period. Cold winds blew most of the time the bloom was on, and dust storms prevailed. Cherries will be a light crop in most districts of Yakima Valley, the estimate for the Grand View district being about 50 per cent. In the southeastern salient cherries are practically nil; dropped account of the cold weather.

**OREGON:** June 1 condition variable but generally fair to poor. Where a cause is given, unfavorable weather conditions are generally held responsible although the specific cause varies in different localities, frost here, winds there. Many reporters state they are at a loss for an explanation of the unfavorable prospects. Willamette Valley: Spotted, ranging from nothing to good. Lamberts in particular are light in some localities with hill orchards showing good crop of Bings and Royal Annes. Sours are normal. Hood River Valley: Bings and Lamberts are not worth picking in some localities. Generally cherries bloomed heavily but dropped, on account of dust some believe as they were in full bloom then. The crop is light and in some localities almost a failure. Some attribute 50% loss on upland cherries to dust storm and almost total failure of lowland cherries to frost. Umatilla County: Royal Annes and Bings won't pay for picking. Trees are large and only few cherries in the tops of the trees. Rogue River Valley: Cherries were thinned out by frost. California: In some areas cherries were damaged by the heavy wind period of four days during late May and later by rain. Cherry harvest has been on for several weeks with good quality but with disastrous prices. Without price improvement large amounts must go unharvested.

States concerned, much of the heavy bloom failing to set. Condition declined nine points on California oranges, 14 points on Florida oranges and 12 points on Florida grapefruit, compared with a usual decline of three to four points. California lemons and Florida limes show only about the average decline for the month. In California, navel oranges have set very irregularly but Valencias are apparently holding a good set.

**LOUISIANA:** The condition of oranges on June 1 in Plaquemines Parish, south of New Orleans, was about 95% of normal. The crop has as good or better condition than it has had for a number of years at this time. A

number of young trees are coming into bearing this season for the first time, and it is estimated by well informed persons connected with the citrus industry that the crop this year will be considerably in excess of last year. Some estimates place the production at 350,000 boxes this season, including grapefruit, tangerines, mandarins, kumquats, and oranges such as Satsuma, Navel, Valencia, etc.

Good weather has prevailed in the citrus fruit belt up to the present. The bloom is heavy and holding well. The number of trees coming into bearing this season for the first time is about 20% of the total in bearing last season. However, owing to the fact that a large number of trees have come into bearing in very recent years, the pro-

duction is increasing due not only to new bearing trees, but also because the trees are becoming larger each year, and their bearing capacity is increasing in a corresponding ratio. Only about 50% of the available land in Plaquemines Parish is now out to citrus fruit, and as additions are constantly being made yearly, the prospects for increased shipments in the next few years are bright.

**ARIZONA:** Groves are receiving excellent care both as to cultivation and as to the amount of manure that has been used. This is mainly barnyard manure. Many groves are now being seeded to sesbania, a type of wild hemp. This will later be plowed under as green manure.

New groves coming into bearing will likely result in a total production greater than last year although the yield per tree will be lighter. The light set of fruit should result in large well matured fruit. Many groves have received dustings. Where this has been sufficiently thorough to control thrip action, the appearance of fruit should be very good. We therefore expect to see fruit of high quality both in Yuma and Maricopa counties.

**CALIFORNIA:** Navel oranges have not set as well as the bloom indicated, while Valencias are still holding a good set. It is yet too early to draw satisfactory conclusions relative to the probable crop.

Lemons are apparently set about as well as in 1930.

Grapefruit outlook is somewhat less than last crop although indications are not yet sufficiently definite except in the desert valleys where the crop is doing well.

**PLUMS AND PRUNES:** Conditions are extremely variable in different localities in Washington and Oregon. While June 1 condition is reported moderately better than a year ago in the Northwest, it is substantially lower than two years ago. A combination of weather factors—frost, wind and dust storms—is held accountable for damage. Lower condition is reported for drying prunes than for the fresh crop. In California, a relatively good crop of plums is expected, but prune production will be much less than the large crop of 1930.

**NEW YORK—Plums:** There is very little difference in the prospects at this date and a year ago.

**MICHIGAN:** Frost damage was apparently negligible. Berrien county reports 81 per cent, Allegan 64, Van Buren 72, and Oceana 67.

**IDAHO—Prunes:** Comments from reporters indicate a very good crop has set and that production should be larger than last year, which was 21,000 tons from which around 1,500 cars were shipped.

**WASHINGTON—Prunes:** Conditions vary widely in the different districts and even within the same locality due probably to the irregular weather conditions of recent months. Some orchards give indications of heavy production, while others in the same neighborhood are almost barren. Douglas and Clark counties will have light crops this season, according to present indications. Late frosts in Clark county did considerable damage. The prune crop damage there may run from 35 to 40 per cent, some growers say. Prunes in Clark bloomed, full bloom, on April 10—three days later than last year—and frost came shortly after the bloom and an east wind burned many leaves on the east side of the trees, according to correspondents. A severe dust storm did much damage to prunes in the Husum district—White Salmon salient.

**OREGON—Fresh Prunes:** Prune prospects as of June 1 are extremely variable along with all other Oregon fruit and are generally only fair. Prune condition in dried prune sections is very variable but generally poor to fair, from a number of causes according to reporters, but chiefly weather conditions. In Douglas county rain during blossoming is blamed for poor prospects; in other sections, wind, drought, dust and frost played important parts in the present poor dried prune prospects. Willamette Valley—Prunes: Spotted, ranging all the way from total failure to a good crop. Fruit is growing fast and some scab is showing up. Prune crop generally shows widest variation, some orchards are cleaned out, others are 100%. Old trees seem to be the ones which are falling this year. Generally, prospects are probably 60% but very spotted for some unknown reason, one tree will be loaded with fruit and its neighbors practically barren. Neighboring orchards with same exposure and identical soil conditions and blooming period show similarly, one loaded, the other blank. Umatilla County: Have just begun to fall, too early to tell much about prospects until after the drop has stopped. Umpqua Valley: In Douglas county are very variable with only a few orchards having a fair crop. Most orchards show a very short crop. Poor prune prospects attributed chiefly to rain during blossoming. More French prunes than Italian.

**CALIFORNIA—Plums:** While the fruit is some exposed orchards was shattered by hard winds during late May, there is still a large total crop in prospect. Early harvest is now on. The state condition is 80% full crop and the forecast placed at 73,000 tons. At this date a year ago, reports showed the condition at 82. The total crop amounted to 82,000 tons. Prunes: As the prune season progresses, the condition on June 1 stands at 62% full crop, forecasting a prospective crop of 198,000 tons. By referring to the condition reports by districts it will be seen that the prune crop is irregular by areas, while reports also indicate that many orchards carry a very irregular set from tree to tree. The largest prune crop of California was produced last year when 254,000 tons were harvested and 13,000 tons left unharvested, showing a total crop produced of 267,000 tons.

## CONDITION OF COMMERCIAL FRUITS

### APPLES

| STATE   | CONDITION JUNE 1        |          |      | CONDITION JUNE 1        |          |      | PRODUCTION             |                   |                                      |
|---------|-------------------------|----------|------|-------------------------|----------|------|------------------------|-------------------|--------------------------------------|
|         | 10-year average 1920-29 | 1930     | 1931 | 10-year average 1920-29 | 1930     | 1931 | 5-year average 1925-29 | 1930 <sup>1</sup> | 1931, forecast from condition June 1 |
|         |                         | Per Cent |      |                         | Per Cent |      |                        | 1,000 Bushels     |                                      |
| Me.     | 85                      | 92       | 78   | 86                      | 83       | 72   | 11                     | 10                | 8                                    |
| N. H.   | 85                      | 93       | 78   | 88                      | 83       | 73   | 13                     | 15                | 12                                   |
| Vt.     | 88                      | 97       | 94   | 86                      | 79       | 90   | 10                     | 10                | 10                                   |
| Mass.   | 83                      | 91       | 87   | 82                      | 83       | 73   | 72                     | 93                | 60                                   |
| R. I.   | 81                      | 86       | 83   | 82                      | 83       | 79   | 11                     | 13                | 10                                   |
| Conn.   | 82                      | 88       | 89   | 82                      | 88       | 70   | 53                     | 69                | 42                                   |
| N. Y.   | 78                      | 74       | 78   | 77                      | 81       | 49   | 1,991                  | 3,168             | 1,080                                |
| N. J.   | 72                      | 72       | 70   | 65                      | 45       | 50   | 483                    | 488               | 350                                  |
| Pa.     | 69                      | 58       | 80   | 64                      | 58       | 65   | 502                    | 620               | 552                                  |
| Ohio    | 63                      | 26       | 80   | 58                      | 27       | 70   | 321                    | 190               | 360                                  |
| Ind.    | 63                      | 36       | 85   | 57                      | 29       | 78   | 235                    | 136               | 315                                  |
| Ill.    | 63                      | 44       | 83   | 55                      | 38       | 74   | 584                    | 315               | 850                                  |
| Mich.   | 74                      | 57       | 83   | 70                      | 58       | 60   | 666                    | 805               | 632                                  |
| Wis.    | 81                      | 63       | 81   |                         |          |      |                        |                   |                                      |
| Minn.   | 80                      | 59       | 72   |                         |          |      |                        |                   |                                      |
| Iowa    | 72                      | 58       | 63   | 60                      | 46       | 48   | 51                     | 33                | 34                                   |
| Mo.     | 57                      | 38       | 84   | 48                      | 30       | 73   | 340                    | 177               | 508                                  |
| S. D.   | 75                      | 66       | 28   |                         |          |      |                        |                   |                                      |
| Nebr.   | 62                      | 56       | 52   | 55                      | 48       | 40   | 27                     | 27                | 21                                   |
| Kans.   | 56                      | 35       | 66   | 45                      | 36       | 55   | 179                    | 108               | 102                                  |
| Del.    | 62                      | 60       | 77   | 48                      | 20       | 62   | 210                    | 142               | 274                                  |
| Md.     | 60                      | 50       | 83   | 56                      | 43       | 74   | 263                    | 180               | 328                                  |
| Va.     | 51                      | 34       | 70   | 43                      | 15       | 76   | 247                    | 80                | 420                                  |
| W. Va.  | 50                      | 40       | 79   | 36                      | 14       | 69   | 52                     | 15                | 96                                   |
| N. C.   | 58                      | 39       | 72   | 49                      | 35       | 68   | 193                    | 115               | 266                                  |
| S. C.   | 61                      | 54       | 66   | 59                      | 47       | 71   | 105                    | 102               | 122                                  |
| Ga.     | 61                      | 56       | 71   | 57                      | 52       | 70   | 187                    | 174               | 234                                  |
| Fla.    |                         |          |      | 59                      | 58       | 74   | 53                     | 56                | 62                                   |
| Ky.     | 57                      | 28       | 80   | 50                      | 19       | 74   | 102                    | 29                | 144                                  |
| Tenn.   | 54                      | 38       | 72   | 46                      | 31       | 72   | 207                    | 124               | 283                                  |
| Ala.    | 58                      | 53       | 72   | 57                      | 53       | 65   | 165                    | 200               | 214                                  |
| Miss.   | 59                      | 46       | 75   | 59                      | 57       | 67   | 165                    | 162               | 196                                  |
| Ark.    | 54                      | 48       | 72   | 50                      | 33       | 67   | 96                     | 65                | 119                                  |
| La.     | 57                      | 50       | 66   | 62                      | 47       | 71   | 67                     | 57                | 72                                   |
| Okla.   | 54                      | 31       | 40   | 41                      | 22       | 14   | 124                    | 40                | 344                                  |
| Texas   | 53                      | 38       | 36   | 55                      | 42       | 43   | 431                    | 350               | 344                                  |
| Mont.   | 83                      | 76       | 68   |                         |          |      |                        |                   |                                      |
| Idaho   | 80                      | 74       | 80   | 74                      | 76       | 74   | 58                     | 66                | 61                                   |
| Wyo.    | 85                      | 76       | 65   |                         |          |      |                        |                   |                                      |
| Colo.   | 81                      | 32       | 62   | 84                      | 45       | 83   | 478                    | 173               | 518                                  |
| N. Mex. | 60                      | 47       | 62   | 46                      | 40       | 52   | 43                     | 30                | 41                                   |
| Ariz.   | 58                      | 70       | 72   | 59                      | 69       | 73   | 14                     | 14                | 15                                   |
| Utah    | 84                      | 82       | 64   | 78                      | 74       | 63   | 64                     | 87                | 60                                   |
| Nev.    | 70                      | 53       | 71   | 65                      | 56       | 71   | 5                      | 6                 | 6                                    |
| Wash.   | 79                      | 71       | 73   | 68                      | 75       | 57   | 2,858                  | 4,500             | 3,150                                |
| Ore.    | 80                      | 85       | 68   | 74                      | 85       | 57   | 2,190                  | 3,200             | 2,310                                |
| Calif.  | 70                      | 76       | 77   | 70                      | 77       | 63   | 8,196                  | 11,333            | 9,167                                |
| U. S.   | 68.2                    | 56.8     | 75.7 | 65.5                    | 62.6     | 61.4 | 22,123                 | 27,577            | 23,572                               |

<sup>1</sup>California and U. S. totals revised.

<sup>2</sup>Includes 1,292,000 bushels not harvested on account of market conditions.

### PEACHES

| STATE                   | CONDITION JUNE 1        |          |      | PRODUCTION             |                   |                                      |
|-------------------------|-------------------------|----------|------|------------------------|-------------------|--------------------------------------|
|                         | 10-year average 1920-29 | 1930     | 1931 | 5-year average 1925-29 | 1930 <sup>1</sup> | 1931, forecast from condition June 1 |
|                         |                         | Per Cent |      |                        | 1,000 Bushels     |                                      |
| N. H.                   | 70                      | 86       | 79   | 28                     | 37                | 29                                   |
| Mass.                   | 65                      | 81       | 72   | 185                    | 232               | 162                                  |
| R. I.                   | 75                      | 76       | 81   | 28                     | 28                | 29                                   |
| Conn.                   | 74                      | 76       | 77   | 213                    | 276               | 210                                  |
| N. Y.                   | 71                      | 70       | 77   | 1,846                  | 2,158             | 1,800                                |
| N. J.                   | 70                      | 38       | 80   | 2,254                  | 1,788             | 2,400                                |
| Pa.                     | 59                      | 33       | 75   | 1,414                  | 996               | 1,872                                |
| Ohio                    | 63                      | 10       | 80   | 1,356                  | 400               | 2,340                                |
| Ind.                    | 52                      | 4        | 87   | 559                    | 12                | 1,080                                |
| Ill.                    | 51                      | 1        | 92   | 1,904                  |                   | 4,116                                |
| Mich.                   | 60                      | 41       | 83   | 941                    | 629               | 1,900                                |
| Iowa                    | 52                      | 24       | 60   | 56                     | 7                 | 62                                   |
| Mo.                     | 45                      | 2        | 88   | 970                    | 24                | 2,070                                |
| Nebr.                   | 46                      | 43       | 39   | 48                     | 31                | 29                                   |
| Kans.                   | 39                      | 11       | 59   | 273                    | 35                | 371                                  |
| Del.                    | 60                      | 42       | 90   | 274                    | 162               | 418                                  |
| Md.                     | 58                      | 41       | 82   | 458                    | 231               | 595                                  |
| Va.                     | 50                      | 15       | 88   | 749                    | 240               | 1,440                                |
| W. Va.                  | 46                      | 15       | 86   | 538                    | 122               | 1,156                                |
| N. C.                   | 62                      | 42       | 85   | 1,808                  | 1,800             | 2,805                                |
| S. C.                   | 63                      | 54       | 78   | 865                    | 952               | 1,275                                |
| Ga.                     | 66                      | 54       | 82   | 7,105                  | 4,698             | 7,330                                |
| Fla.                    | 69                      | 61       | 82   | 103                    | 102               | 128                                  |
| Ky.                     | 58                      | 9        | 87   | 699                    | 75                | 1,350                                |
| Tenn.                   | 56                      | 28       | 82   | 1,466                  | 630               | 2,240                                |
| Ala.                    | 62                      | 56       | 77   | 973                    | 1,105             | 1,292                                |
| Miss.                   | 64                      | 52       | 82   | 524                    | 490               | 722                                  |
| Ark.                    | 55                      | 5        | 78   | 2,373                  | 84                | 2,952                                |
| La.                     | 63                      | 50       | 75   | 191                    | 112               | 218                                  |
| Okla.                   | 42                      | 6        | 15   | 694                    | 80                | 220                                  |
| Texas                   | 49                      | 31       | 43   | 1,685                  | 750               | 1,209                                |
| Idaho                   | 51                      | 15       | 76   | 217                    | 32                | 310                                  |
| Colo.                   | 77                      | 68       | 74   | 704                    | 817               | 1,187                                |
| N. Mex.                 | 57                      | 25       | 45   | 93                     | 51                | 94                                   |
| Ariz.                   | 55                      | 82       | 72   | 67                     | 88                | 79                                   |
| Utah                    | 72                      | 49       | 72   | 473                    | 335               | 560                                  |
| Nev.                    | 48                      | 76       | 48   | 6                      | 6                 | 5                                    |
| Wash.                   | 57                      | 33       | 60   | 1,012                  | 615               | 945                                  |
| Ore.                    | 56                      | 58       | 51   | 258                    | 280               | 216                                  |
| Calif.                  | 80                      | 84       | 85   | 19,709                 | 13,167            | 30,375                               |
| Clingstone <sup>2</sup> |                         | 84       | 88   | 12,142                 | 822,584           | 21,500                               |
| Freestone <sup>2</sup>  |                         | 84       | 86   | 7,587                  | 110,583           | 8,875                                |
| U. S.                   | 64.3                    | 47.1     | 78.5 | 55,210                 | 53,617            | 78,091                               |

<sup>1</sup>California and U. S. totals revised.

<sup>2</sup>Too small to estimate.

<sup>3</sup>Includes some quantities not harvested on account of market conditions as follows: Georgia, 1928—1,000,000 bushels; California, 1927—2,708,000, 1928—2,917,000, 1930—10,637,000 bushels including 6,179,000 bushels purchased but left on trees.

<sup>4</sup>Mainly for canning.

<sup>5</sup>Mainly for drying.

**CITRUS FRUITS:** More than the usual decline occurred in the condition of oranges and grapefruit during May in most of the



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